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ABSTRACT

This instructor's resource guide, one in a series of products from a project to develop an associate degree program for paraprofessional rural family health promoters, deals with teaching a course in paraprofessional skills. Covered in the first section of this guide are the role of paraprofessional skills in rural health promotional training, general objectives and recommendations for instructors, suggested laboratory procedures, references, and recommended course texts. A series of unit overviews dealing with the following topics are provided: disease and illness, disorders and diseases of the body systems, the cardiovascular system, disorders and diseases of the reproductive tract, maternal and child health, health care needs and problems of the geriatric client, and first aid and emergency. Each unit overview contains general and specific objectives and a content outline. Concluding the guide are a discussion of methods and materials for student evaluation and a description of other materials in the Family Home Health Training Program series. (MN)

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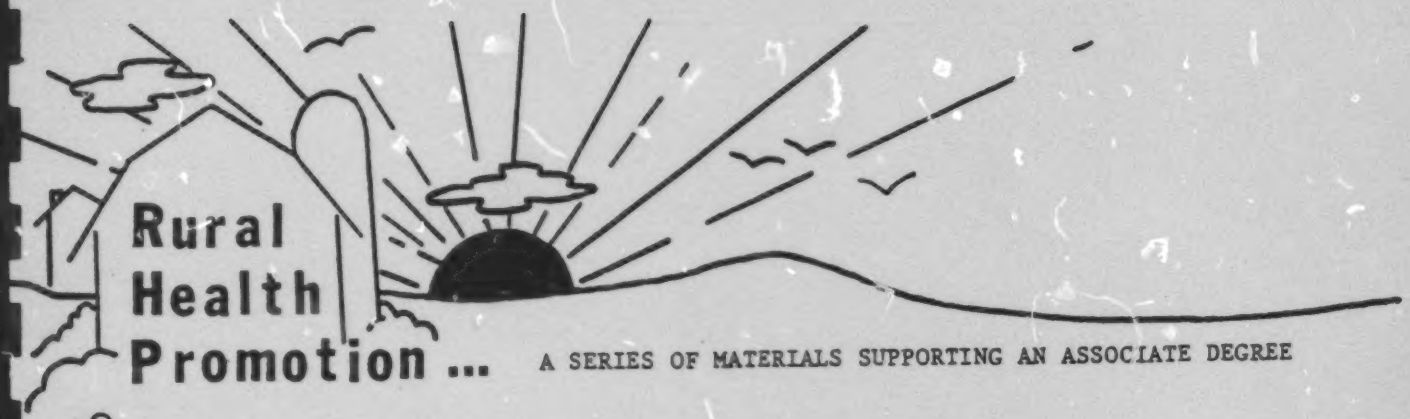

A SERIES OF MATERIALS SUPPORTING AN ASSOCIATE DEGREE

ED237716

APPENDIX TO
A FINAL REPORT ON THE
PARAPROFESSIONAL RURALLY ORIENTED
FAMILY HOME HEALTH TRAINING PROGRAM

an instructor resource guide for
teaching a course in

PARAPROFESSIONAL SKILLS I

and

PARAPROFESSIONAL SKILLS II

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developed for
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AN INSTRUCTOR RESOURCE GUIDE
FOR TEACHING TWO COURSES

PARAPROFESSIONAL SKILLS I
and
PARAPROFESSIONAL SKILLS II

part of a Series of Materials Developed to Support
an Associate Degree in Rural Health Promotion

developed for
THE U. S. DEPARTMENT OF EDUCATION
OFFICE OF VOCATIONAL AND ADULT EDUCATION

developed by
THE PARAPROFESSIONAL RURALLY ORIENTED FAMILY HOME HEALTH
TRAINING PROGRAM
THE DIVISION OF NATURAL SCIENCES
THE BAPTIST COLLEGE AT CHARLESTON
CHARLESTON, SOUTH CAROLINA

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1983

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INTRODUCTION

RURAL HEALTH PROMOTION -
Definitions and Assumptions

The Associate Degree in Rural Health Promotion was developed out of concern for the health status of Americans in rural areas. Behind the development of such a paraprofessional degree lie certain definitions and assumptions about rural areas and the health problems they face. It is therefore appropriate to delineate some terms and concepts before describing the degree and its components in more detail. While this discussion will not attempt to comprehensively document the changing perceptions of rural issues, it summarizes the development of "mind-sets" which undergird the development of this project.

Probably the most difficult definition to make is of the term "rural". While we can easily quote dictionary definitions, there are important intrinsic and extrinsic connotations to the word "rural" which also need to be explored. The term rural carries with it tacit assumptions about population density, types of employment, character and structure of population centers, as well as the values and outlooks of the citizens. For example, RURAL is seen as:

country, not city
provincial, limited in perspective
unsophisticated
rustic
simple, leisurely paced life
religious
agricultural

William H. Friedland, in an article in The Journal of

Rural Sociology in 1982, suggests that if we base our definition of rural on the concept of this type of homogeneous culture, then we will find few rural areas left in the United States. This country has seen the development of an urban - rural continuum in terms of population densities which blurs any clear cut geographical definition, producing "fringe" areas with combination characteristics. So called "reverse" migration to lower density areas, as well as the effects of modern news and entertainment media, have resulted in "country" communities where many of the basic conditions of urban life are reproduced - culture, food, commodities, interests, etc.

These views of the changing character of rural populations are upheld by other studies in a variety of fields. Farms have become agribusinesses, with even small farms showing the impact of technological advances. Farm "managers" show the same life style illnesses of stress and overload as do urban managers. More importantly, while three out of five country residents in 1920 were engaged in farming, by 1970 this had changed to only one out of five - and is still dropping. Of the populations in rural areas, 24% of the whites and 11% of the blacks were recent arrivals - coming originally from urban areas. Yet total rural population size has changed little since 1920, while urban populations have often tripled.

Even population size definitions for "rural" vary from expert to expert. The Encyclopedia Britannica (1975 ed.) defines U.S. rural populations by default - by saying "rural" is "not urban", and "urban" means places of 2,500 or more and their fringes. A dictionary definition gives rural as "areas with less than 1,500 population". Obviously, the area's size as well as its population should be considered.

In the United States, 25% of the population lives on 90% of the land. For these "rural" areas, density varies from 200 per square mile near cities to one per ten square miles in the western mountains. In addition to density differences,the midwestern rural resident is still most likely to be involved in agriculture, the Appalachian rural populations organize their lives around the mining industries, and ,in the Carolinas, rural populations often include high percentages of textile workers.

What characteristics DO occur consistently in rural areas? While individuals and special sub-populations may defy these trends, rural populations do seem to have:

* twice the poverty rate as cities
* more under and unemployed adults
* lower educational status
* higher percentages of children, elderly, and poor

The last item on the preceding list leads us into the specific health problems of the U.S. rural resident, for all three sub-populations - children, the elderly, and the poor - have more health needs than the average citizen. However, once again the specific health needs of rural areas are somewhat inconsistent with our preconceptions. While we picture the "country life" as leading to healthy longevity, the rural populations of America have more activity limiting chronic health conditions than do urban populations. Regardless of our vision of country life as providing healthier air, diets, and activity, rural citizens suffer from more heart conditions, more arthritis, more mental illness, more high blood pressure, and more visual impairment. Infant mortality rates are higher, alcohol use and the resultant drinking and driving mortalities are severe problems. In other words, the health issues associated with life style are more predominant in the country than in our "high pressure,

polluted, unhealthy" cities.

These, and other health problems of the rural areas of our country, are made more distressing by the realities of non-urban health care. The following figures, taken from the report on Health Care in Rural America (U.S. Dept. of Agriculture Bulletin 428), show how rural areas provide for health care:

area type	medical personnel per 100,000 population
metropolitan	157
non-metro.	71
rural (near urban)	35
rural (far from urban)	37

The problem is not with acute care - hospitals are often equally accessible to the urban dweller, the suburban dweller and the rural resident (at least in terms of access time - "from my house to seeing the doctor"). It is precisely the type of life style oriented services, focusing on chronic and preventative care, which are needed by the rural resident which are not available. This is an age - old problem; as Hippocrates said, " Healing is a matter of time, but it is sometimes also a matter of opportunity."

Certainly one way of approaching these problems is to increase the numbers of traditional health professionals who serve rural areas. This has proved to be easier said than done; physicians and nurses are costly to train and costly to support, if not for the area they serve then for society as a whole. Moreover, the U.S. Surgeon General's Report on Healthy People states that major gains in the health status of Americans in general will not be made by increasing access to traditional treatment alone, but will also require enhanced emphasis on promotion of disease

preventative life styles.

In this same vein, but focused on the needs of rural areas in particular, the Health Care in Rural America report suggests that communities train residents to serve as paraprofessionals in health care provision, from EMS(Emergency Medical Technician) services, to basic first aid, and on to health promotion and health education. Eva J. Salber and her co-workers in North Carolina addressed these needs by exploring the usefulness of "health facilitators" or "lay advisors". Their project sought to "promote good health and prevent illness rather than concentrating on the cure of illness alone" by using lay members of a community who have received "training in promotive health practices, prevention of disease, in early recognition of illness together with first aid measures."

In A Sociology of Health by Andrew C. Twaddle and Richard M. Hessler, the authors state that "...of all the strategies for improving medical care for the (rural) poor, the substantial increase in new nonphysician medical manpower is possibly the most important innovation..." Even in the areas of mental health (as discussed in Mental Health of Rural America ,NIMH and The Nonprofessional Revolution in Mental Health by Francine Sobey) paraprofessionals from rural communities have been used effectively. Part of the introduction to Sobey's book comments, "Nonprofessionals are utilized not simply because professional manpower is unavailable but rather to provide new services in innovative ways."

Although most of the training for such paraprofessionals, in both the mental and physical health areas, began as informal training programs, in both cases expanded programs soon became important. Twaddel and Hessler discuss the problem of insufficient training, both

in terms of its impact on lay workers' competency and acceptance by existing professional care givers, as well as the impact on upward or outward mobility. They quote one paraprofessional as saying "I don 't have a degree, so if I left here I may have to go ... back to business machines. I don't really feel secure. If something happens you have to try and get a job. You should at least get an associates degree in college." Nevertheless, Twaddel ends the section on Community Health Workers with these thoughts, " ...the seed has been planted for changes in health manpower. If health care is to be made available to all as a right on the order of public education, then change must occur...The community health worker program has provided a model for the creation of a new occupational hierarchy."

These then are the components which shaped the development of the Associate of Natural Sciences in Rural Health Promotion:

1. the realities and myths of rural existence
2. the need for enhanced health care in rural areas based on chronic life style illnesses and on-going inadequate numbers of treatment professionals
3. the perceived and experienced strength of utilizing community paraprofessionals
4. the training insufficiencies defined by both professionals and the paraprofessionals themselves

The next sections summarize the specific philosophies and content of the Associate Degree in Health Promotion, followed by suggested uses, and then detailed course content. For other published materials on this project, please refer to the Supplementary Materials at the end of the course materials.

AN ASSOCIATE DEGREE IN
RURAL HEALTH PROMOTION

As an innovative approach to meeting the health needs of rural America, the Rural Health Promotion Associate Degree has been developed by the Baptist College at Charleston under Contract No. 300-81-0436 with the U. S. Department of Education, Office of Vocational and Adult Education. The curriculum and special courses developed under this contract do not reflect ideas that are new to health. Instead, they draw upon several maturing concepts: health promotion, paraprofessional preparation, and holistic principles. These concepts have been used to develop an integrated, state of the art, approach to personal and community health enhancement--the paraprofessional degree in health promotion.

First, the program represents the movement toward health promotion, as an equal partner with treatment, in improving the health status of Americans. The 1979 U. S. Surgeon General's Report on Healthy People explored in great detail the role health promotion and disease prevention will play in further expansion of the Nation's health care system. The American Rural Health Newsletter (April 1983), in looking at "Rural Health Care at the Crossroad", points out "the public's desire for comprehensive health and its growing interest in health promotion."

Secondly, this program reflects an increasing awareness of the usefulness of paraprofessionals in expanding the impact of health care systems. Health promotion is one of the few areas of health services which is relying more on "people power" than on sophisticated technology. Since the goals of health promotion always includes the empowerment of the individual to make decisions about his own health habits and environment, the use of paraprofessionals is particularly appropriate. Working under the guidance of treatment, health education, and public health specialists, the paraprofessional can extend the reach of existing health promotion programs in a variety of settings from medicine and psychology to industry and religion. In the introduction to The Nonprofessional Revolution in Mental Health (Sobey, 1970) Frank Riessman points out that

"Nonprofessionals are utilized not simply because professional manpower is unavailable but rather to provide new services in innovative ways... It is noteworthy that their main function has not been to relieve professional staff to tasks requiring less than professional expertise. The major finding is that nonprofessionals are being trained for new service functions and roles, in many cases roles that were not previously being played at all..."

The idea to use two year college programs to train such paraprofessionals is not new. The Mental Health of Rural America (Segal, 1973) evaluated projects which experimented with ways to meet rural mental health needs. The projects seen to have the greatest impact were two year college programs designed to prepare people to work as paraprofessionals in a wide range of community settings. The Rural Health Promotion Degree is different in the following respect. The two year program designed at the Baptist College reflects very specifically the current movement toward holistic principles of health. Rather than focusing preferentially on physical or mental health, the program provides formal educational experiences in studies relevant to the "whole" person.

The curriculum draws from a strong natural science base (33 credits) to build an understanding of both the biological and psychological aspects of human health. By including studies in religion and sociology, as well as written and spoken communication skills, it prepares the student for effective intervention in social and interpersonal settings. Then, to focus this basic knowledge on disease prevention/health promotion, the program includes specialized courses which provide understanding of health care organizations and issues, health promotion methods, fundamentals of paraprofessional care and a prevention/promotion practicum experience.

The Associate Degree in Rural Health Promotion was designed to fit comfortably into a traditional four year college's offerings or into any technical college which offers general Associate of Arts or Associate of Science degrees. At least one full year of the program is made up of courses which are commonly offered by psychology,

science, sociology, mathematics, English, and religion departments. The specialized courses related to health promotion and paraprofessional skills will often be useful to students in other disciplines who plan to work in settings which interface with health care providers. In addition, the degree's specialized content might be used to develop a minor in health promotion for baccalaureate students or to provide required courses to update existing allied health and related degrees.

The specific course content of the Associate Degree in Rural Health Promotion is listed in annotated form in the next section.

SUGGESTED ACADEMIC CONTENT

Listed below are those courses suggested as required to earn an Associate Degree in Rural Health Promotion. The courses marked with an asterisk (*) are those which were specifically designed for the Health Promotion degree and are available as part of this set of materials. Whole prerequisites are not noted here for the specialized courses, specific prerequisites are in the detailed materials overviewing each course in the series.

English Composition and Rhetoric: Courses designed to improve students ability to express themselves accurately and effective in writing. (6 credits)

*Interpersonal Communication-Techniques and Styles: This course will teach techniques of good interpersonal communication include specific skills in listening, decision making, observation, assessment, interviewing, and group process. It will explore the effect of individual attitudes and beliefs on communication as well as cultural characteristics of communication and barriers to communication. (3 credits)

General College Mathematics: A course in general math skills with an emphasis on application. (3 credits) Or a more advanced course.

General Psychology: An introduction to concepts underlying the understinding of behavior. (3 credits)

Human Growth and Development: An overview of human development psychologically for conception through senescence, with an emphasis through adolescence. (3 credits)

Psychology of Adulthood and Aging: A study of development during adulthood. (3 credits)

Principles of Sociology: A focus on the ways sociology provides understanding of group behavior and human relations. (3 credits)

Introduction to Community Services: Introducing the organization, methods, settings of community social services. (3 credits)

Survey of New Testament: The content of the new testament. (3 credits) OR

Introduction to Group Dynamics: Religious and psychological principles applied to interpersonal relationships and group functions. (3 credits)

Anatomy/Physiology: A study of human structure and function with emphasis on the body systems. (4 credits)

Microbiology: Study of micro-organisms with emphasis on normal and pathological conditions in man and environment. (4 credits)

*Epidemiology: A study of the inter-relationship among organisms, the environment, and man. The course develops an understanding of the history of disease, their signs, symptons, and prevention. It provides a working knowledge of the terms; morbidity, mortality, acute disease, and chronic disease. Basic data are presented concerning the application of demographics, community health care, and the epidemiologic study of the causal factors of disease. (3 credits)

Nutrition: Concepts of human nutrition applied to health and disease, world hunger, and personal nutrition. (3 credits)

*Concepts of Chemistry: Key principles needed in allied health and liberal arts. (4 credits)

*Health Care Organization and Issues: The purpose, functions, and administration of community health care services, public and private. A study of issues affecting health care utilization and delivery; consumerism, ethical issues, and future technology. (3 credits)

*Health Promotion Seminar: A cognitive presentation of the major areas of emphasis for health promotion - exercise, concern over what we put into our bodies (foods, alcohol, tobacco, and other drugs), and living in high stress environments--and concommitant presentation of the major techniques of personal responsibility and personal change. The course requires application of these concepts to develop experiential knowledge in behavior change. It will also develop critical consideration of emerging health promotion ideas in both professional sources and the popular media. (1 credit)

*Fundamentals of Paraprofessional Care I and II: Development and application of knowledge and paraprofessional skills in physical care, emotional support, personal hygiene, and safety/first aid. Acute and chronic conditions will be covered. Working knowledge of medical terminology and consumer oriented pharmacology. Laboratory experiences complement the lectures and include certification in Cardiopulmonary Resuscitation. (8 credits)

*Practicum in Health Promotion: Application of classroom knowledge in community based programs related to health promotion/ disease prevention. During the first two weeks of the Semester and the last week of the Semester, this calss will meet 3 hours per week on campus to structure the students' practical experiences and discuss class assignments and requirements. The remainder of the semester the course will consist of 9-12 hours/week of experience in a community based program and one class meeting per week on campus. (3 credits)

Electives (3-6 credits); Electives are suggested from sociology, especially in the area of social institutions or rural concerns, and in health and physical education, especially in the area of fitness and aerobics and recreational exercise.

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USING THESE MATERIALS IN TEACHING RURAL HEALTH PROMOTION

The Rural Health Promotion project materials include the seven course modules newly designed for this associate degree (see Suggested Academic Content), a project report, preliminary evaluation reports for both concept and courses, and a series of Focus Guides for use with existing care courses. Although designed to be used as a two year associate degree curriculum in a college setting, the individual courses can be used separately as they fit other academic needs.

All of the courses in this series were developed in a regular semester format for students who meet general admissions requirements for a four year college. It may be that a paraprofessional program such as Rural health Promotion will attract students whose high school preparation has been less academic than traditional four year students. However, we feel it is preferable to meet any such deficiencies as they arise using, existing college resources, rather than to structure the program and course content at a lower level. One specific reason for this is based in the nature of the activity for which these students are being prepared.

The health promotion paraprofessionals will need to function in their communities in a median position between the professional health care providers and lay recipients of such care. The credibility with which they function will be based in part on their ability to communicate with, and value the standards and expectations of, people on both ends of this care continuum. Interactions with the professional community may be tenuous at best in some settings. The existance of "watered down" courses in the program could contribute to a perception of the paraprofessional as "amateur." Indeed, other paraprofessional roles--such as the paramedics--have been effected by this attitude. Even nursing, now a profession in its own right, was once seen as "wasting our time educating a group of semi-professionals." (Jensen's History and Trends of Professional Nursing)

A second reason for dealing with deficiencies outside of this program is to clearly integrate the program academically into the parent institution, rather than having it exist with a separate

level of expectations. Finally, students who have clearly and directly faced their own learning deficits should be better prepared to relate to the lay end of the professional-lay continuum with understanding and compassion.

It is expected that these courses may merely be a first approximation of what is needed in some academic settings. Each course includes state-of-the-art material at the time it was written and edited, including references and suggested support materials. Yet, health promotion is a rapidly growing field where excellent new materials are developing daily. We feel the objectives, concept outlines, and supplementary materials can be used either as specific delineation of a course or as general core concerns to be fleshed out according to other professional interests and directions.

Reports on the development of the curriculum for the Associate of Natural Sciences in Rural Health Promotion and the proto-type field testing and evaluation of both concept and courses are also available as part of this series of materials. The project report components may be useful for health education designers or administrators or for service providers as they plan directions in training and community services for the last part of the Twentieth Century. Even if this degree has only limited implementation, we feel the ideas and directions addressed in the project overall and in the courses specifically can serve as stimuli for discussion and decision making in a society with changing ideas of health, health care, and responsibility for health.

Finally, the Rural Health Focus Guides were developed to direct the thoughts of teachers in core areas (such as English, mathematics, sociology, etc.) without re-writing existing courses. These materials are listed separately in the Supplementary Materials section and may be interesting for educators who are concerned or curious about the interface between their area of expertise and changing concepts of community and personal healt

SPECIFIC COURSE MATERIALS

FOR

PARAPROFESSIONAL SKILLS I

and

PARAPROFESSIONAL SKILLS II

THE ROLE OF
FUNDAMENTALS OF PARAPROFESSIONAL CARE
IN THE RURAL HEALTH PROMOTION CURRICULUM

Although it has been uncommon to train paraprofessionals in health promotion through a college degree, paraprofessionals have been used in health settings for many years. There are many community programs which teach skills and information in health which can be applied on a paraprofessional level. The two lecture/laboratory courses in paraprofessional care draw from existing training for community paraprofessional to teach a broad spectrum of useful knowledge and skills in a coherent manner. While previous courses in biology and psychology allow for a more sophisticated treatment of some of the subjects than might be common in a community volunteer settings, the skills are still those of a paraprofessional. These courses will pull together data about common health problems and situations and will prepare the paraprofessional to be an informed member of their community and family and to work with a variety of health care systems.

The skills of paraprofessionals commonly used in communities include physical care (in home health settings), psychological support (in Help Centers and Hotlines), personal hygiene (with youth groups and the elderly), safety and first aid (on job settings and as a concerned citizen). The necessary knowledge includes understanding the development, prevention, intervention, and treatment of common community and personal health problems - more often at a chronic than at an acute level.

This broad spectrum of abilities, from being able to take blood pressure readings and apply basic first aid, through emergency first aid such as Cardiopulmonary resuscitation, and including the ability to listen to people's problems and to help them develop an understanding of them (at a reflective, not therapeutic, level) are commonly used in communities in hospitals and nursing homes, in home health support services, in halfway houses and other supportive residential settings such as Hospice, detoxification units, and shelters. The paraprofessional care course will teach these and

other skills in an integrated and coherent manner, linking techniques and knowledge in the paraprofessional area to academic content of the rest of the program and preparing the student for actual work in the health promotion practicum.

GENERAL OBJECTIVES FOR
A COURSE IN
PARAPROFESSIONAL SKILLS

Brief catalog description: Paraprofessional Skills I and Paraprofessional Skills II--3 semester hours

The purpose, function, and administration of paraprofessional skills services, public and private. A study of skills affecting health care utilization and delivery; consumerism, ethical issues, and future technology.

Objectives:

PARAPROFESSIONAL SKILLS I

SECTION A

Unit I. *After completion of this unit the student will be able to identify the common causes of disease, the common predisposing factors to disease and the usual method of classifying diseases.*

Unit II. *After completion of this unit the student will be able to understand the psychosocial factors and adjustment that must be made by families when illness and/or disease is present in a family, and will be able to assess health needs performing a health needs appraisal.*

Unit III. *After completion of this unit the student will be able to explain how the body responds to illness and describe the effects of major groups of microorganisms on the body.*

Unit IV. *After completion of this unit the student will have an understanding of how disinfection occurs and will be able to utilize this information when working with individuals and families in the community.*

Unit V. *After completing this unit, the student will be able to identify the signs of illness and distinguish these signs of generalized infection, and the student will be able to list measures that the sick person may take at home to manage the symptoms of generalized infection.*

Unit VI. *The student after completion of this unit will be able to develop and administer a Home Health Needs Appraisal, identify both the individual and the family's health needs, and then develop a plan whereby the individual and the family's needs can be met. The plan will include actions that the individual and the family can take to meet their health needs as well as outside actions that can assist the individual and the family to meet their health needs.*

SECTION B

Unit VII. *The student, after completion of this unit, will be knowledgeable about written meal plans for persons with specific digestive disorders requiring special diets.*

Unit VIII. *After completion of this unit the student will be able to identify the health care needs of an individual or a family with a respiratory disorder, and will be able to work in an educational or supportive manner with a health care team.*

Unit IX. *After completion of this unit the student will have knowledge of the blood's function and structure, the component parts of blood, the pathophysiology of shock, and related patient care needs, and will be able to work in an educational or supportive manner with a health care team.*

Unit X. *After completion of this unit the student will be aware of the health care needs of an individual who has a urinary disorder and will be able to work with community resources who are meeting the needs of such individuals.*

Unit XI. *The student, after completing this unit, will be aware of the health care needs of individuals who have a disorder of the endocrine glands, and will be able to work in an educational and supportive manner with the health care team helping individuals and families to manage diabetes mellitus at home.*

Unit XII. *After completion of this unit the student will be knowledgeable about the health care needs of an individual with a neurologic disorder, will be able to refer this individual to the appropriate community resource or agency for assistance in meeting these health care needs, and will be able to work in an educational or supportive manner with a health care team.*

Unit XIII. *The student, after completing this unit, will be knowledgeable about the health care needs of an individual who has an infectious or non-infectious skin lesion or a serious burn. The student will be able to work with an individual or a family in an educational or supportive manner to recover to their optional potential.*

Unit XIV. *After comletion of this unit the student will be aware of the health care needs of an individual or a family who has a disease or disorder of the musculoskeletal system, and will be able to work in an educational and supportive manner with a health care team.*

Unit XV. *After completion of this unit the student will have an understanding of eye and ear disorders and diseases. The student will be able to utilize this knowledge to assist health care providers helping persons in the community to manage eye and ear disorders and diseases at home.*

PARAPROFESSIONAL SKILLS II

SECTION A

Unit I. *Upon completion of this unit the student will be able to work in an educational and supportive manner with a health care team which administers health care to individuals with diseases of the cardiovascular system to meet their health care needs and reach an optimum level of health.*

Unit II. *Upon completion of this unit the student will be able to perform appropriate paraprofessional emergency first aid for respiratory failure and cardiac arrest in victims of all ages.*

SECTION B

Unit III. *Upon completion of this unit, the student will be able to discuss the common conditions that affect the female reproductive tract and will be able to apply this information in an educational and supportive manner in community setting.*

Unit IV. *Upon completing this unit, the student will be able to discuss the common conditions that affect the male reproductive tract and will be able to apply this information in an educational and supportive manner in community setting.*

Unit V. *Upon completion of this unit the student will be able to provide community education about sexually transmitted diseases and assist community health care teams in a supportive manner in follow-up care of individuals.*

SECTION C

Unit VI. *Upon completion of this unit, the student will be able to provide educational and supportive services interfacing with health care services to childbearing families in the community.*

Unit VII. *Upon completion of this unit, the student will be aware of the health care needs of the neonate after discharge from the hospital, and will be able to interface with health care providers in an educational and supportive manner*

Unit VIII. *Upon completion of this unit, the student will be knowledgeable about the typical health care needs of different ages. The student will be able to refer children and their families to appropriate community resources when problems in growth and development are identified, and to provide educational and supportive services to familites, regardless of age.*

Unit IX. *Upon completion of this unit, the student will be knowledgeable about health care needs of children and will be able to provide educational and supportive assistance to families to meet the health care needs of sick and well children.*

SECTION D

Unit X. *Upon completion of this unit, the student will be aware of the normal health care needs of the older adult and will be able to provide educational and supportive services for health care teams working with the geriatric client and their families.*

Unit XI. *Upon completion of this unit, the student will be knowledgeable about the specialized health care needs of geriatric clients and families living in the community.*

SECTION E

Unit XII. *Upon completion of this unit, the student will be able to provide appropriate paraprofessional-level first aid in an emergency situation, and the student will receive a certificate in First Aid.*

GENERAL RECOMMENDATIONS FOR THE INSTRUCTOR

The two courses in Paraprofessional Skills were designed to be taught sequentially, in semesters of 14-15 weeks each. Units are determined by conceptual groupings and not by class periods or week.

Each course consists of a series of conceptual units to be covered in a lecture/discussion session format, meeting for three hours a week for the semester. In addition, a three hour laboratory session is scheduled for eah week. The content of the laboratory classes is covered in the next section of this document, titled "Laboratory Recommendations" followed by recommendations for references and texts for both segments of each course. Then the conceptual units for each course are detailed.

Each unit overview includes a general objective, a set of specific objectives which all together act to produce the general objective, and a content outline indicating the material to be covered. It is assumed each instructor will personalize this material by assigning approapriate readings and activity assignments from chosen texts and available references and resources. Notes on suggested testing procedures are included in the Supplementary Materials section. The information in each unit has been drawn from typical health and nursing texts, including those listed under References.

The content outlines and objectives could be used not only as lecture references for the instructor but could also be distributed to students as overview and review aids.

The two Paraprofessional skills courses cover general causes of disease, disease development, disorders of the various body systems, and concerns relating to family

health throughout the life cycle. Often the material detailed in the content overviews is first a review and then an extension of material covered in preceeding courses in this program, which are prerequisites for enrollment in the Paraprofessional Skills I: chemistry, microbiology, anatomy and physiology, epidemiology, nutrition, interpersonal communications, health promotion seminar, human growth and development, psychology, and psychology of adulthood and aging. Since this program is a paraprofessional program, and since the students have chosen an associate degree over other related bachelors degrees, we asssume that this overlap is necessary and positive. It is expected that the lecture/discussion sessions of these two courses will serve to pull together many concepts learned earlier into a coherent idea of the healthy and un-healthy functioning of the human being.

The use of audio visual aids and other instructional enhancements are strongly urged; no specific recommendations are made since new materials and methodologies are appearing on the market faster than our recommendations could be published(for example, computer assisted learning and computer modeling of systems).

In both the lecture/discussion sessions and perhaps in the laboratory setting, outside speakers may be a positive addition. The following guidelines are suggested for using outside speakers.

Speakers Visiting the Classroom: Health care professionals seldom have public speaking as one of their required duties, but their professional goals tend to make them willing to take on these extra tasks. Be sure to arrange things as far in advance as possible; even organizations with speakers bureaus will do a better job for you if you give them time to locate their best speaker in your interest area. While you need to be specific

about the content which will most enhance your classroom goals, you will also need to respect the needs and realities of the speakers themselves.

Outside speakers will provide better services if you give them content and format guideline. One suggested approach to getting personalized service is to provide each speaker with the general objectives of your course, the "Role of ..." section from this instructors' guide, and a set of questions or topics you'd like them to cover. Specificy if you wish them to be prepared to answer questions. With budgets in health care being limited, it would be helpful if you offer to reporduce any handouts they might need. Be sure to tell them how long they can speak, the exact time you will turn the class over to them, and the exact time the classperiod ends. Give you speaker an idea, preferably in writing of what you ahve told your students to expect, of the class's background in the subject, anf of material which will be covered by any speakers preceeding or following them in the semester. Obviously all such background material needs to be delivered to the speaker at least a week prior to their scheduled visit withyour class.

Since speakers often come to your class in addition to their regular duties, it is not inappropriate to take them to lunch or give them a small token of your appreciation. A formal letter of recogntion, highlighting the positive aspects of their visit, should be sent to them and/or their supervisor after their talk.

Site Visits: Site visits may also be appropriate, but since earlier courses in this series use site visits, be sure to check with the students before planning the outing. You should keep in mind all of the suggestions made for class speakers. In addition, a call the day before your visit is approprite to confirm exact times and

other details. Respect the schedule of anyplace you visit, and give them as much time as they planned for. Leaving early may not only mean that your students miss miportant information but also that staff who have spent time preparing for your visit have done so in vain. A letter to the person who cooordinated the visit, listing those who spoke to you and the positive elements of the visit for your students is not just good manners, it may also help the facility justify the time they spent with you (and groups like yours) when it comes time for planning and allocating resources at that facility. For sites that have been especially accomodating, a plant or some flowers for their staff or reception area is a nice touch.

Outside Student Assignments in Addition to or in Lieu of Laboratory/Classroom Activities: There are many ways in which your community resources can help provide a fuller and more meaningful experience for students learning paraprofessional skills. The following activities could count as major credit toward the students grades and would probably require some sort of extensive oral/written report. These are not suggest inplace of full semester field placements but rather as short, controlled educational projects.

For both course I and II, volunteer work in local hospitals, day care centers for either the young or the elderly, senior citizens centers, nursing homes, halfway houses and the like are excellant chances to observe professionals at work and mentally consolidate the cognitive and experiential knowledge gained in the course.

For each Unit on one of the body systems, a

student could visit someone in a nursing home two or three times discussing with the patient and the staff the problems the disease causes to the resident, their families, etc. This could also be done in cooperation with local Home-Health Care programs, Traveling Home maker programs, programs for the hearing or vision disabled.

A student or a group of students could interview family members identified by local support and voluntary organizations as representing problems discussed in the course. Organizations who may be of help include Big Brother/Big Sister, American Lung Association, American Heart Association, American Cancer Association, other associations specialized by disease area.

A student or group of students could work with health care cases from the local Public Health Department: for example maternal health clinic, well baby clinic, immunization clinic, etc.

Children in day care settings can be observed and described, comparing information gained with course content in growth and development. The physical growth, motor development, language development, and activities could be compared for
Infants (1 month to 12 months)
Toddlers (1 to 3 years)
Preschool (4 and 5 years)

School age (6 to 12 years)

Access to children with specialized problems such as sight and hearing reduc tion, mental retardation, learning disabilites, emotional problems, could be sought through special interest groups, sheltered workshops, and the public schools special education program.

A mock disaster could be used to practice emergency first aid; this could become a campus wide activity, educating the student body, faculty, and staff on the problems encountered with natural emergencies - earth quake, fire, flood/hurricane, tornado, etc. It would be good to choose a problem which might indeed occur in your area and about which the general public needs to be informed. Perhaps the activity could be coordinated through other local groups (Red Cross, Disaster Preparedness Offices, etc) and could be taken "on the road" to schools, shopping centers, and churches.

Health fairs can be arranged, focusing on the areas covered in the two courses and educating the students by making them make contacts with local resources as well as being responsible to organization, administration, and information provision. Again, this could be done in cooperation with local health departments, councils, and the like who include health education as part of their public responsibility. (the National Health Fair program may be active in your area; contact the local or state health departments or the local

Health Systems Agency for information)

LABORATORY RECOMMENDATIONS
FOR PARAPROFESSIONAL CARE

A paraprofessional needs to have a broad knowledge base in medical concerns. Their skills, however, need to reflect common paraprofessional tasks and responsibilities in a community. Often, knowledge will be at a higher level of sophistication than skills; many things which it will be very appropriate to "know about" would be inappropriate to act upon. In the laboratory sessions for the two paraprofessional courses, no skills will be taught which could not be acted upon. We can characterize the skills under the following categories:

1) Home health skills:
   - personal and family hygiene skills - healthy people skills
   - family illness - care; home evaluation, simple home care techniques, related practical nursing skills, when to call the Doctor or seek emergency help

2) General community first aid and emergency responses:
   - first aid responses to non-life threatening situations
   - emergency responses to life threatening situation (CPR; Heimlich maneuver)
   - evaluation/analysis; seeking professional help

3) Communicating about health
   - information gathering skills
   - general assessment skills
   - crisis intervention skills

Many, if not most of the skills needed by the paraprofessional in communities as part of the volunteer training for hot lines, homemakers, hospital volunteers, Hospice volunteers, and so on. Others are available as community outreach or education from organizations such as the Red Cross, Community School programs, PTA's, health departments, mental health associations, and from special problem oriented organizations (lung assiciation, epilepsy association, retarded citizens support groups, etc.).

Where community volunteer training already exists, it should be used - either in its current form or integrated into specific laboratory sessions.

The laboratory experiences should take the form or illustration/

demonstration/discussion of specific skills and practice of each skill by each student.

Skills which would be illegal (or dangerous) for a general community member or volunteer to perform should not be discussed, demonstrated, or included. Where careful training exists and is usually given to members of the general public (CPR, for example) training is appropriate.

What we wish to produce through this laboratory experience is the most competent, capable, skillful person which could be produced by general community and specialized volunteer training.

Laboratory evaluation could take the form of skill evaluation on either minimum competency and criteria basis or using conventually graded skill testing. It is strongly recommended that at least CPR and first aid training be taught such that any existing public certificates in these skills will be able to be awarded to students who complete the paraprofessional courses. "Skills" should not be evaluated predominently by written, congnitive measures. One approach to organizing the laboratories for these two courses follows -

total lab hours: 15 weeks (3 hours per week) maximum
13 weeks (3 hours per week) minimum
39 hours x 2 courses = 78 HOURS minimum

Skills which are often taught in community settings and which might be used "as is" in place of special lavoratories are marked with *.

Hours Needed	Course	Skill
4 hours	I	assessment interviewing skills (*Hot lines, etc.)
8 hours	I	crisis communications (*Hot lines, etc.)
8 hours	I	home health skills (practical nursing skills) beds/bedrooms diet cleanliness vital signs following doctor's orders
8 hours	I	home care of typical illnesses short term illness high temperature respiratory problems infectious illness medication (*drug agencies) accidents - physical injuries
10 hours	I	Introducation to first aid (*Red Cross, community schools)
18 hours	II	CPR, Heimlich Maneuver (*Red Cross, community schools)
15 hours	II	first aid (*Red Cross, community schools)
6 hours	II	chronic illness convulsions asthmas, allergies mental health problems-phobias fears depression retardation learning disabil addictions elderly-mobility bed-ridden medications (*drug commissions, systemic chronic illness (*heart association, lung association, epilepsy association, mental health association, retarded citizens association, learning disabilities associations, etc.)

REFERENCES AND SUGGESTED COURSE TEXTS

The concept of paraprofessional skills is rather new; the idea of specifically educating toward such an end at the college level is quite new and the references needed for student and instructor reading are hard to find. To a great extent, these references are "out there" on the shelves and as the training documents in health departments, Hot Lines, halfway houses, etc. Recommendations given below may prove to be too advanced or too elementary for some audiences; the responsibility will rest with the instructor to make the required connections for the student. If a nursing text is chosen, care must be taken to clearly (in writing) identify for the students the material for which they are NOT responsible and the tasks which it would be unprofessional to attempt.

Paraprofessional Skills I and II draw much of their content outlines from the following resources, which are certaining important for the instructor to read and which may be useful for the students as well.

Johnston, Dorothy and Gail H. Hood, Total Patient Care. St. Louis: The C.V. Mosby Co. 1976.

Keane, Claire Blackman. Essentials of Medical Surgical Nursing. W.B. Saunders Co. 1979.

Also used in course II:

Martin, Leonide L. Health Care of Women. Philadelphia, PA:the J.B.Lippincott Co. 1978

Leech, Constance and V.Jane Bliss. Maturnity Nursing. St. Louis:the C.V. Mosby Co.1978

Ingalls, Joy A. and M. Constance Salerno. mAternal and Child Health Nursing. St.Louis: the C.V. Mosby Co. 1979.

Brichenall, Joan M. and Mary Eileen Streight. Care of the Older Adult. Philadelphia, PA:J.B.Lippincott Co. 1982.

References Appropriate to the Laboratory: The following references which are used for the laboratory are appropriate to instructor and students.

The American Nation Red Cross. Advanced First Aid and Emergency Care. (can be obtained from your local Red Cross)

The American Red Cross. Respiratory and Circulatory Emergency. (can be obtained from your local Red Cross)

Heimlich, Henry with Lawrence Galton. Dr. Heimlich's Home Guide to Emergency Medical Situations. NY,NY:Mordern Promotions/Publishers, Division of Unisystems, Inc. 1980

U.S. Department of Education, Division of Vocational and Technical Education. A Course for Training the Health Care Worker (Course for the Rural Health Worker, a Suggested 6 Month Training Program.) OE 07.0906.

Center for Occupational Research and Development. Safety and Health for Allied Health Education. developed for the U.S.Department of Education Office of Vocational and Adult Education.1981. (Center for Occupational Research and Development, 601 Lake Air Drive, Suite C., Waco, Texas 76710.

Ohio Trade and Industrial Education Service. Nursing Procedures for the Practical Nurse. State Department of Education, Columbus Ohio. 1972.

HIGHLY RECOMMENDED -
Several other reference are highly recommended as general texts and resources. These are particularly relevant to the issues of health promotion and are completely appropriate to students at this level.

Murray, Ruth Beckman and Judith Proctor Zentner. Nursing Concepts for Health Promotion. and Nursing Assessment and Health Promotion through the Life Span. Englewood-Cliffs, NJ:Prentice Hall Publishers.1979.

a journal-
Family and Community Health, the Journal of Health Promotion & Maintenance. published quarterly by Aspen Systems Corporation, 16792 Oakmont Ave., Gaithersburg, MD. 20877 each issue focuses on an issue relevant to health promotion, e.g., November 1983 -"Drug Therapy, including Rational Guidelines for use of Antipsychotic Drugs, Nutritional Consequences of Oral

Contraceptives, Drug use in Infants and Children-
a Developmental Background, Poinsoning:
Epidemiology and Prevention, Infectious Diseases:
a Question of Priorities, etc."

UNIT OVERVIEWS

PARAPROFESSIONAL SKILLS I

SECTION A
DISEASE AND ILLNESS

UNIT I

CAUSES OF DISEASE AND PREDISPOSING FACTORS TO ILLNESS

General Objective

After completion of this unit the student will be able to identify the common causes of disease, the common predisposing factors to disease and the usual method of classifying diseases.

Specific Objectives

The student will be able to:

1. List the six major causes of disease.
2. Name seven micoorganisms that cause infection.
3. Name the group of microorganisms that causes rheumatic fever of bacterical endocarditis.
4. Identify the group of microorganisms that are responsible for sores, abscesses, and carbuncles.
5. Name the three types of diplococcus and describe one characteristic about each type.
6. Name the four infectious diseases caused by the vacillus organisms.
7. Describe the shape of the Spirilla organism.
8. Define the word viruses and list three facts about viruses.
9. Name the parts of the body usually involved in superficial fungus infections.
10. List the two deep infections caused by fungi.
11. Describe how the rickettsia microorganism causes disease.
12. List the two categories of metazoa and define each category.
13. List the three types of tapeworms, and explain how transmitted, and conditions caused by each type of tapeworm.
14. Name the four types of Nematoda and explain where each type is found, how transmitted, and conditions caused by each type of Nematoda.

15. State four reasons why chemical agents and/or poisonings are a major health problem in the United States.

16. Discuss five reasons why hereditary and congenital disorders are considered a major cause of illness.

17. List five predisposing factors to illness and discuss each factor.

CONTENT OUTLINE

I. Infections Caused by Microorganism
   - A. Strptococci, Staphylococcus aureus, diplococcus
   - B. Bacilli
   - C. Spirilla
   - D. Viruses
   - E. Fungi
   - F. Protozoa
   - G. Rickettsia

II. Metazoa (Helminths)
   - A. Platyhelminthes
   - B. Nematoda

III. Malnutrition
   - A. Insufficient food
   - B. Inbalanced diet
   - C. Body unable to utilize nutrients

IV. Physical Agents
   - A. External temperature changes
   - B. Electric current
   - C. Exposure to radiation
   - D. Atmospheric pressure changes

V. Chemical Changes - Poisoning
   - A. Ingestion of poisonous substances
   - B. Nonpoisonous substances in toxic doses
   - C. Inhalation of carbon monoxide or other gases
   - D. Dust inhalation and its relations to respiratory diesases, coal miners, black lung, and asbestosis.
   - E. Poison control center
   - F. FDA control of drugs, food, food additives, pesticides, sprays.

VI. Congenital and Hereditary Disorders
   - A. German measles
   - B. Relation of infectious diseases to birth defects
   - C. Defects in the skeletal system
   - D. Defects due to prematurity
   - E. Defects due to birth injuries

F. Defects due to drugs
G. Defects carried by the genes

VII. Predisposing Factors to Disease
A. Aging process
B. Tumor growth
C. Emotional disturbances
D. Sensitivity reactions
E. Inadequate self care

VIII. Classification of Disease
A. Cause
B. Affected part of the body or system

UNIT II

INDIVIDUAL AND FAMILY REACTIONS
TO ILLNESS/DISEASE

General Objective

After ocmpletion of this unit the student will be able to understand the psychosocial factors and adjustment that must be made by familites when illness and/or disease is present in a family, and will be able to assess health needs performing a health needs appraisal.

Specific Objectives

The student will be able to:

1. Discuss 3 possible effects of illness on a family.
2. List several factors that determines how a family reacts to serious illness.
3. Explain why communication is necessary in a family affected by illness.
4. Explain the concept of total patient care and the need for numerous health care professionals to meet the health needs of individuals and their families.
5. Explain the function and effect of the "extented family" upon an individuals progress with disease.

CONTENT OUTLINE

I. Psychosicial situations and interpretations

II. Family reactions to illness.

III. Adjustment to illness

IV. The role of the extended family in health care

V. A team approach to meeting health care needs of patients, and families in the community to provide total health care

UNIT III

THE BODY'S RESPONSES AND
DEFENSES AGAINST DISEASE

General Objective

After completion of this unit the student will be able to explain how the body responds to illness and describe the effects of major groups of microorganisms on the body.

Specific Objectives

The student will be able to:

1. Explain the relationship between specific microorganisms and disease.
2. Compare conditions necessary for aerobic bacteria to grow with anaerobic bacteria.
3. Name two conditions which permit bacteria to grow.
4. Name the characteristic of spores which makes them difficult to kill.
5. Explain why encapsulated bacteria are difficult to kill.
6. Name 4 portals of entry for micoorganisms.
7. Name 5 portals of exit for microoganisms.
8. Define endotoxin and exotoxins and give an example of each.
9. List five factors that affect pathogenicity.
10. List the five types of external defenses against micro-organisms and explain each.
11. List 10 external defenses against bacterial invasion.
12. List 3 internal defenses against bacterial invasion.
13. Name 4 signs of infections.
14. Explain phagocytosis.

15. List 8 of the 10 classifications of infections.

16. Describe 8 conditions that occur as a result of micro-organisms invading the body.

17. Discuss the treatment of disease utilizing the three major types of druge including the action of each type of drug.

18. Explain the concept of immunity and the two major types of immunity.

19. Describe how to administer vaccines.

20. Explain how passive immunity may be obtained.

21. Describe conditions necessary for anaphylaxis.

CONTENT OUTLINE

I. Microbiology and Pathology
   - A. Basic shape of bacteria, round, oblong, and spiral
   - B. Variations of basic shapes among bacteria
   - C. Chemical composition and waste products of various bacteria
   - D. Aerobic bacteria and anaerobic bacteria
   - E. Motility of bacteria-flagella, wiggling motion
   - F. Spores resistant to heat and disinfectants
   - G. Encapsulated bacteria
   - H. Gram-positive, gram-negative bacteria
   - I. Collection of specimens for laboratory tests

II. Bacterial Portals of Entry
   - A. Respiratory system
   - B. Digestive system
   - C. Urinary system
   - D. Skin

III. Bacterial Portals of Exit
   - A. Discharge from nose and throat
   - B. Vomitus
   - C. Feces
   - D. Urine
   - E. Draining wounds

IV. Blood Transfusion and Placental Transfer

V. Endogenous Infections

VI. Exogenous Infection

VII. Exotoxins

VIII. Factors Influencing Pathogenicity
- A. Whether pathogens gain entrance by characteristics routes
- B. If affinity is only for certain types of tissues
- C. Degree of Virulence
- D. Number of pathogens that enter the body at a given time
- E. Degree and character of resistance, natural, or acquired offered by the host against invading pathogens

IX. Body's Defenses Against Bacterial Invasion
- A. External defenses
  1. Unbroken skin mucous membranes
  2. Acid medium of skin and antibacterial enzymes
  3. Lacrimal fluid
  4. High acid content of stomach
  5. Enzymes
  6. Vaginal secretions
  7. Cilia in the nasal passages, trachea, and bronchi around nasal openings
  8. Sneezing, coughing, vomiting, diarrehea
- B. Internal defenses
  1. Less understood
  2. Blood and body fluids
  3. Phagocytosis
  4. Serum proteins
- C. Inflammation most common defense
  1. Signs of inflammation
  2. Process of inflammation
- D. Infection
  1. Definition and process of
  2. Classification of infections
  3. Conditions resulting from infections
- E. Classifications of Infections
- F. Conditions resulting from infections
  1. Abscess
  2. Bacteremia
  3. Gangrene
  4. Necrosis
  5. Pyemia
  6. Sanfuineous discharge
  7. Septicemia
  8. Serous discharge
  9. Toxemia

X. Chemotherapy Treatment
- A. Sulfonamides
- B. Antibiotics
- C. Corticosteriod

XI. Immunity
- A. Antigen
- B. Antibody
- C. Natural immunity

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D. Acquired immunity
   1. Vaccines
   2. Toxoids
   3. Serums
   4. Administration of vaccines
   5. Passive immunity
   6. Antitoxins
   7. Immunoglobulin

XII. Allergy
   A. Serum sickness
   B. Anaphylaxis

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UNIT IV

ASEPSIS AND DISINFECTION

General Objective

After completion of this unit the student will have an understanding of how disinfection occurs and will be able to utilize this information when working with individuals and families in the community.

Specific Objectives

The student will be able to:

1. List and discuss the two major types of asepsis.
2. List and describe three types of antiseptics.
3. Name four factors to be considered when utilizing disinfectants.
4. Name 8 common types of chemical disinfectants.
5. Give examples of when chlorine compounds are used.
6. Describe the situations in which Lysol and cresol would be used as disinfectants.
7. Explain why alcohol is an ineffective disinfectant.
8. Name the disinfectant used to treat the eyes of newborn infants.
9. List three nethods by which sterilization may be accomplished.
10. Discuss the importance of handwashing in giving patient care.

CONTENT OUTLINE

I. Two Major Types of Asepsis
   A. Medical Asepsis
   B. Surgical Asepsis

II. Antiseptics
   A. Antiseptic agents
   B. Disinfectant
   C. Germicide

III. Disinfectants
   A. Strenght of solution
   B. Time
   C. Temperature
   D. Type of material to be disinfected

IV. Chemical Disinfection By
   A. Cholrine compounds
   B. Phenol compounds
   C. Ammonium compounds
   D. Alcohol
   E. Iodine
   F. Silver nitrate
   G. 2% boric acid
   H. Hydrogen peroxide

V. Sterilization
   A. Factors to consider
   B. Gas, sterilization with ethylene
   C. Boiling
   D. Hot air sterilization
   E. Steam under pressure

VI. Handwashing, facts and techniques to consider

UNIT V

SYMPTOMS OF ILLNESS

General Objective

After completing this unit, the student will be able to identify the signs of illness and distinguish these signs of generalized infection, and the student will be able to list measures that the sick person may take at home to manage the symptoms of generalized infection.

Specific Objectives

The student will be able to:

1. List seven signs of a generalized infection.
2. Identify ten measures that an individual may take to manage an infection at home.
3. Name seven signs that are general signs of illness of disease.
4. Develop a written plan of care for a family who has a sick family member.
5. Utilize appropriate handwashing and isolation techniques.

CONTENT OUTLINE

I. Symptoms of Generalized Infection
   A. Fever
   B. pulse and respiratory rate
   C. Leukocytosis
   D. Chills
   E. Loss of appetite
   F. Sweating
   G. Delirium
   H. nausea, vomiting, diarrhea

II. Measures to Take to Manage or Cope with Symptoms of Infection at Home or in the Community Setting
   A. Bed rest
   B. Asprin, alcohol baths for fever
   C. Warm cleansing bath
   D. Special mouth care, lubricant for lips.

E. Keep urinary output up;
   1. 1000 ml. for adults
   2. 500 ml. for children
   3. 300 ml. for infants
F. Keep intake up: 3000 ml. in 24 hrs. for adults
G. Diet - liquid
H. Back rub, quiet, will ventilated room
I. If delirious, protect from injury
J. Careful handwashing by all members of the family

III. Other Signs of Illness and/or Disease
   A. Unexplained wieght loss
   B. Blood in urine, stools, or sputum
   C. Unexplained persistent fatique
   D. Lump, mass, or tumorous growth
   E. Loss of appetite
   F. Any change in normal body functions (ie., change in sleep habits, bowel pattern, etc.)

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UNIT VI

DEVELOPMENT AND ADMINISTRATION OF A HOME HEALTH NEEDS APPRAISAL FOR INDIVIDUALS AND THEIR FAMILIES

General Objective

The student after completion of this unit will be able to develop and administer a Home Health Needs Appraisal, identify both the individual and the family's health needs, and then develop a plan whereby the individual and the family's needs can be met. The plan will include actions that the individual and the family can take to meet their health needs as well as outside actions that can assist the individual and the family to meet their health needs.

Specific Objectives

The student will be able to:

1. Accurately administer the Home Health Needs Appraisal.
2. Accurately identify health needs of individuals and families on the basis of data collected by the Home Health Needs Appraisal.
3. Develop a written plan of care that specifies measures that individuals and families can take to meet their health needs.
4. Specify measures in the written plan of care for individuals and families which are actions that the rural home health care giver should take in order to assist both the individuals and their families to obtain optimum health.
5. Identify the appropriate community resources needed by families to meet their health care needs.
6. Perform an accurate assessment of the individual and/or families health problems in relationship to an environmental approval - i.e. plumbing, sanitation, etc.
7. Perform an accurate health needs assessment using a simplified body systems approach, i.e., nutrition, respiratory function, mobility function, urinary or bowel function, mobility, digestive, reproductive, and neurological function.

CONTENT OUTLINE

I. Numbers of Family Members

II. Income Range of the Family

III. Living Conditions
   A. Home
   B. Indoor plumbing
   C. Adequate sewage

IV. Literary Level of the Family

V. Number of Miles Away from the Nearest Available Source of Health Care

VI. Is the Disease or Illness a Short Term Illness, Chronic-Long Term Illness, or an Acute Illness with Long Term Side Effects?

VII. A. Does the Individuals Health Problem Involve a Change in:
      A. Nutirition, daily diet
      B. Respiratory function
      C. Mobility function
      D. Urinary or bowel function
      E. Digestive or gastrointestinal function
      F. Reproductive functions
      G. Neurological functions
   B. Are the individuals vital signs deviated from normal?

VIII. How has the individual and his family accepted and adjusted to the individuals illness? Does the individual and/or his family need to be referred for further treatment?

IX. According to the problems identified in #7 what resources should the individual and or his family be referred to in order to manage the problem optimally?

X. What measures can the family or individual institute to promote comfort and relieve pain, or promote convalescence and healing or institute measures that permits the individual to manage his health problem at home instead of being cared for in an institution?

SECTION B
DISORDERS AND DISEASES OF THE BODY SYSTEM

UNIT OVERVIEWS

PARAPROFESSIONAL SKILLS II

UNIT VII

NUTRITIONAL NEEDS OF THE SICK AND DISORDERS OF THE DIGESTIVE SYSTEM

General Objective

The student, after completion of this unit, will be knowledgeable about written meal plans for persons with specific digestive disorders requiring special diets.

Specific Objectives

The student will be able to:

1. Name the basic food groups and describe a normal diet.
2. List five common effects of illness on nutrition.
3. Describe two factors which influence food preferences.
4. Describe points to remember when feeding adult patients.
5. Describe points to remember when feeding infants, toddlers, and older children.
6. List 3 causative factors associated with disorders of the Digestive System.
7. List seven common diagnostic test for diagnosing specific disorders of the digestive system.
8. Discuss the three types of digestive disorders.
9. List the causes of intestinal obstruction and the related health care needed.
10. Define and list 9 remaining common digestive disorders.
11. Explain the three types of jaundice.
12. Discuss the three types of viral hepatitis, and list the symptoms and treatment of each.
13. List the causes, symptoms, treatment and related health care needs of cirrhosis.
14. Explain the difference between cholecystitis and cholelithiasis and compare symptoms and treatment for each.

15. Explain the difference between acute and chronic inflammation of the pancreas relating the symptoms and treatment for each type.

CONTENT OUTLINE

I. Basic Nutrition Requirements
   A. Basic food groups
   B. Caloric determination
   C. Food customs and patterns in the community
   D. Meal planning utilizing eating patterns generally seen in rural communities.

II. Affects of Illness on Nutrition
   A. Change in appetite
   B. Increase of decrease in needed number of calories
   C. Change in normal eating patterns - small frequent meals instead of 3 large meals.
   D. Change in route used for eating:
      1. I.V.
      2. Gastrostomy
      3. N/G tube feeding
   E. Change to special diet
      1. Full liquid diet
      2. Clear liquid diet
      3. Soft diet
      4. Diabetic diet
      5. Bland diet
      6. Low-sodium diet

III. Food Preferences
   A. Religious beliefs
   B. National orgin

IV. Feeding Adults, Facts to Remember

V. Feeding Children: Facts to Remember
   A. Newborns to two years of age
   B. Toddlers 18 months to 36 months

VI. Disorders of the Digestive System
   A. Process of Digestion and Absorption
   B. Accessory organs of digestion
      1. Liver
      2. Gallbladder
      3. Pancreas
   C. Causative factors
      1. Socioeconomic
      2. Psychological
      3. Physical

D. Diagnostic test
   1. X-ray
   2. Gastroscopy
   3. Esophagoscopy
   4. Proctoscopy for polyps
   5. Sigmoidoscopy
   6. Gastric analysis
   7. Stool examination

E. Common problems and associated health care needs
   1. Dysphagia
   2. Accumulation of fluid and gases
   3. Serious imbalances of alimentation

F. Inflammatory disorders
   1. Stomatitis
   2. Gastritis
   3. Ulcerative colitis

G. Appendicitis

H. Peritonitis

I. Peptic Ulcer

J. Cancer of the Stomach

K. Cancer of the large intestine

L. Intestinal obstruction, causes of

M. Abdominal Hernia

N. Diverticula

O. Hemorrhoids

P. Pilonidal sinus

VII. A. Gallbladder and Liver Function
   1. Gallbladder studies
   2. Liver function studies

B. Jaundice
   1. Three types
   2. Related health care needs

C. Viral Hepatitis
   1. Three types
   2. Symptoms and treatment

D. Cirrhosis of the liver
   1. Causes
   2. Symptoms
   3. Treatment and related health care needs

E. Cholecystitis
   1. Symptoms
   2. Treatment and related health care needs

F. Cholelithiasis
   1. Symptoms
   2. Treatment

G. Pancreatitis - Acute or chronic inflammation of the Pancreas
   1. Symptoms
   2. Treatment and related health care needs

UNIT VIII

DISORDERS OF THE RESPIRATORY SYSTEM

General Objective

After completion of this unit the student will be able to identify the health care needs of an individual or a family with a respiratory disorder, and will be able to work in an educational or supportive manner with a health care team.

Specific Objectives

The student will be able to:

1. Name and locate on a drawing the anatomical structures of the respiratory system.
2. List and identify 8 different types of respirations.
3. Define and compare the differences between a bronchography examination and a brochoscopy examination.
4. Discuss the procedures: throacentiesis, thoracotomy, and tracheotomy (tracheostomy) explaining the purpose of, and location of each procedure.
5. List six common diagnostic tests and procedures used for respiratory disorders.
6. List the signs of oxygen dificiency.
7. Name four methods for maintaining a free airway.
8. Name three procedures that provide relief of irritation of the respiratory passages.
9. Name the four types of mechanical respiratory ventilation and explain the difference between each type.
10. Explain the different ways to administer oxygen.
11. List and define 8 different noninfectious respiratory conditions.
12. Explain the pathophysiology of infectious respiratory conditions.

13. Identify and define 5 infectious respiratory conditions effecting only the upper respiratory system.

14. Explain and list measures to prevent complications, the spread of infections and relieve discomforts from symptoms affecting the respiratory system.

15. Identify conditions affecting the lower part of the respiratory system.

16. Discuss the health, social aspects, and rehabilitation aspects to consider when an individual has a disorder of the respiratory tract.

CONTENT OUTLINE

I. Respiratory Structure and Function
   A. Major anatomical structures in the respiratory system
   B. Function of the respiratory system

II. Abnormal Types of Respiration
   A. Dyspnea
   B. Hypoxia
   C. Apnea
   D. Cheyne - Stokes
   E. Asphyxia
   F. Cyanosis
   G. Hyperventilation
   H. Hypoventilation

III. Diagnostic Test and Procedures
   A. Routine Blood examination
   B. Blood gas studies
   C. Sputum examination and culture
   D. Pulmonary function tests
   E. Gastric washings
   F. X-ray examination and fluoroscopic studies
   G. Bronchography
   H. Bronchoscopy
   I. Thoracentesis
   J. Thoracotomy
   K. Tracheotomy, tracheostomy

IV. Signs of Oxygen Deficiency
   A. Physical signs, such as headache, yawning, sighing, nausea, vomiting, anorexia, restlessness, and excitement

V. Methods for Maintaining a Free Airway
   A. Coughing
   B. Suctioning
   C. Postural drainage
   D. Percussion

VI. Procedures for Providing Relief of Irritation of the Respiratory Passage
- A. Throat irrigation
- B. Plain or medicated steam inhalations
- C. Medications by nebulization

VII. Mechanical Ventilation
- A. Assisted ventilation
- B. Controlled ventilation
- C. Pressure cycled
- D. Volume cycled

VIII. Rotating Tourniquets

IX. Oxygen Therapy
- A. Nasal Cannula
- B. Oxygen by mask
- C. Oxygen by tent
- D. Precautionary measures when oxygen in use
- E. Hyperbolic oxygen

X. Noninfectious Respiratory Conditions
- A. Epistaxis
- B. C O P D - pathophysiology of
- C. Chronic Bronchitis
- D. Asthma
- E. Bronchiectosis
- F. Pulmonary embolism and infection
- G. Pulmonary edema
- H. Atelectasis and pneumothorax

XI. Infectious Respiratory Conditions
- A. Pathophysiology
- B. Acute coryza
- C. Acute pharyngitis
- D. Acute laryngitis
- E. Tonsilitis
- F. Sinusitis
- G. Measures to prevent complications, prevent the spread of infection and relieve discomfort from symptoms for individuals with infections of the upper respiratory tract
- H. Influenza
  1. Types of virus
  2. Persons who should receive the vaccine
- I. Acute Bronchitis
- J. Pneumonia
  1. Pathophysiology
  2. Symptoms
- K. Pleurisy and empyema
- L. Foreign bodies
- M. Tumors of respiratory system

1. Cancer of the larynx
2. Cancer of the lung

N. Chest wounds
1. Fractured ribs
2. Penetrating wounds

XII. Health, Social Aspects, and Rehibilitation

UNIT IX

DISORDERS OF THE BLOOD SYSTEM

General Objective

After completion of this unit the student will have knowledge of the blood's function and structure, the component parts of blood, the pathophysiology of shock, and related patient care needs, and will be able to work in an educational or supportive manner with a health care team.

Specific Objectives

The student will be able to:

1. Explain the function of blood, listing four specific functions.
2. Describe the structure of blood. List the two major structures and describe the purpose of each.
3. Define leukocytosis and leukopenia.
4. Define erythrocytes and erythropoiesis.
5. List and discribe the five major component parts of blood.
6. Explain the pathophysiology of hypovolemic shock.
7. Identify the major fluid component of the body.
8. Explain intracellular fluid, extracellular fluid, intravascular fluid, interstitial fluid, the relationship between the component parts and how balance is maintained between the component parts.
9. Match the name of a blood diagnostic test with the correct definition.
10. List the four types of blood and explain the purposes for blood typing and cross matching.
11. List three indications for a blood transfusion.

12. Describe the pathophysiology involved in hemorrhagic anemia and list 8 conditions which result in a hemorrhagic anemia.

13. Describe the pathophysiology of iron-deficiency anemia and treatment.

CONTENT OUTLINE

I. Structure and Function of the Blood
   A. Function
   B. Structure
      1. Plasma, plasma proteins
      2. Cells
         a. Erythrocytes
         b. Leukocytes, granular and nongranular leukocytes
         c. Differential
         d. Platelets or thrombocytes

II. Blood Components
   A. Blood Plasma
   B. Platelets
   C. Globulins
   D. Cryoprecipitate
   E. Packed Red Blood Cells

III. Hypovalemic Shock
   A. Pathophysiology
      1. Decreased circulating volume
      2. Decreased venous return to the heart
      3. Decreased oxygen to cells
      4. Compensatory mechanisms of the body
      5. Decreased blood pressure, increased pulse, and respiratory rates, loss of consciousness, skin cool, pale, moist, temperature subnormal, cyanosis, coma, death
   B. Pertinent parient care needs and observations
   C. Collection and storage of blood
      1. American Red Cross
      2. Hospitals
      3. Plasmapheresis

IV. Body Fluids and Electrolytes
   A. Body composed of 60-70% water
   B. Intracellular fluid
   C. Extracellular fluid
      1. Intravascular fluid
      2. Interstitial fluid
   D. Balance controlled by intake and output
   E. Electrolytes
      1. Sodium, Calcium, Potassium, and Magnesium
      2. Measured by analysis of blood pressure
      3. Acquired by ingestion of fluids and water
      4. Lost by loss of fluids

V. Diagnostic Test and Prodedures
   A. Complete blood count
   B. Blood gas analysis
   C. Hemaglobin electrophoresis
   D. Paul-Bunnell test
   E. Coagulation time
   F. Hematocrit
   G. Icterus index
   H. Prothrombin time
   I. Sedimentation rate
   J. Bone marrow aspiration
   K. Blood chemistry
   L. Blood serology

VI. Blood Typing and Cross Matching
   A. Blood types
   B. Transfusions
   C. Administration of whole blood
   D. Rh factors
      1. Rh positive
      2. Rh negative
      3. Determination of Rh
   E. Uses of blood transfusions
      1. To replace or maintain blood valence
      2. To preserve oxygen-carring power of blood
      3. To increase or maintain regulation ability of blood

VII. Blood Dyscrasias
   A. Causes
      1. Hereditary
      2. Life-style predispositions
   B. Anemia
      1. Hemorrhagic anemia causes
         a. Traumatic injury
         b. Hemoptysis
         c. Childbirth
         d. Ulcerative lesions
         e. Disorders of coagulation
         f. Gastric ulcer
         g. Hemorrhoids
      2. Pathophysiology of hemorrhagic anemia
         a. Loss of blood
         b. Severe loss, hematogenic shock
         c. Shock
      3. Emergency treatment
      4. Follow up care
   C. Iron-deficiency anemia
      1. Hemaglobin contains 50% of iron in the body
      2. Causes
         a. Excessive menstrual bleeding
         b. Repeated pregnancies
         c. Blood loss in gastrointestinal
      3. Pathophysiology
         a. Abnormal decrease in hemaglobin 71

b. Small and poorly shaped red blood cells are unable to carry normal amounts of hemaglobin
c. Body exhausts stored supply of iron
d. Decreased pigment - hypochromia develop
e. Symptoms: fatigue, weakness, pallor, nail become brittle, tongue sores, difficulty in swallowing
f. Treatment, outpatient

D. Pernicious anemia
1. Pathophysiology of
2. Treatment
3. Patient care measures

E. Sickle Cell anemia
1. Hereditary, blacks
2. Pathophysiology
3. Treatment and patient care needs

F. Polycythemia
1. Chronic disease found in males often affects Jewish people
2. Primary and secondary forms of the disease
3. Cause of proliferation of erythrocyte in bone marrow unknown
4. Decreased rate of blood flow and increased viscosity
5. Increased leukocytes
6. Defective platelet factor causing increased coagulation time
7. Spleen and liver enlarged
8. Bleeding into mucous membranes and skin
9. Treatment and patient care needs

G. Disorders of white blood cells
1. Leukocytosis
2. Leukipenia
3. Infectious mononucleosis
4. Agranulocytosis

H. Hodgkin's Diesease

I. Leukemias
1. Acute leukemia
2. Chronic leukemia
3. Treatment and patient care needs

J. Hemorrhagic Disorders
1. Hemophilia
a. Classic helophilia A
b. Christmas Disease or Hemophilia B
c. Von Willebrand's disease or Hemophilia C
2. Symptoms
3. Treatment and patient care needs

K. Vascular purpura
1. Categories: idiopathic thrombocytopenic purpura
thrombocytopenic purpura
2. Treatment and patient care needs

L. Splenomegaly

NIT X

DISORDERS OF THE URINARY SYSTEM

General Objective

After completion of this unit the student will be aware of the health care needs of an individual who has a urinary disorder and will be able to work with community resources who are meeting the needs of such individuals.

Specific Objectives

The student will be able to:

1. List the six major organs of the kidneys.
2. List three major functions of the kidneys.
3. List six causes of urinary disease and disorders and explain each.
4. Define normal urinary output, retention, anuria, incontinence, residual urine, and enuresis.
5. Identify abnormal constituents of urine.
6. Match the names of diagnostic test with the correct definition.
7. Identify five radiological tests used for urinary disorders.
8. Describe appropriate catheter care for individuals with a urinary disorders.
9. Identify and describe three types of urinary drainage.
10. Identify infectious urinary disorders form noninfectious disorders.
11. Describe five kinds of tumors of the urinary tract.
12. Explain renal failure and its treatment.
13. Discuss three types of urinary diseases care needed for each.
14. Define cystotomy, uteterotomy, nephrectomy, and nephrostomy.

15. Discuss associated psychosocial problems of patients with urinary disorders.

CONTENT OUTLINE

I. Structure and Function of Urinary System
   A. Organs
   B. Functions
      1. Filter
      2. Maintain water and electrolyte balance
      3. Maintain acid-base balance

II. Causes of Urinary Disorders and Disease
   A. Infection
   B. Obstructions
   C. Tumors
   D. Trauma
   E. Allergy
   F. Degenerative changes

III. Urinary Output
   A. Normal rate to filter, concentrate, and execute in 1500 ml. to 2000 ml. in 24 hours
   B. Retention, causes
      1. Delayed anbulation after surgery
      2. Obstruction
      3. Trauma
      4. Childbirth
      5. Emotional factors
   C. Suppression, anemia caused by
      1. Nephritis
      2. Shock
      3. Cardiac decompensation
      4. Extreme dehydration
   D. Residual urine
   E. Incontinence
   F. Enuresis
   G. Diuretics
      1. Action
      2. Limitations
   H. Diagnostic Test and Procedures
      1. Urinalysis
         a. Routine urine collection
         b. Washed or "clean-catch" specimens
         c. Sterile urine collection
         d. Commerically prepared test materials
         e. Fractional urine test
         f. Urine culture
      2. List of Kidney Function
         a. Non protein nitrogen, NPN or BUN
         b. Concentration and Dilution Test

c. Phenolsulfonphthtalein Test, PSP
d. Serum Creatinine

3. Other tests
   a. KUB
   b. Pyleography
      1. Intravaneous pyleogram
      2. Retrograde pyleogram
   c. Cystography
   d. Cystoscopic
4. Radioisotope Studies
   a. Renography
   b. Renoscan
   c. Renocascular studies

I. Patient Care Needs, Specific Aspects
1. Intake and output
2. Urinary drainage
   a. Closed urinary drainage
   b. Urine collection sets
   c. Urine tidal drainage
3. Catheter care
4. Catheter irrigation
5. Care of patients after catheter removal
6. Agency referral for follow-up care

J. Nonifectious diseases of the urinary system
1. Glomerulonephritis, acute, subacute, chronic
2. Nephrotic syndrome
3. Nephrosclerosis

K. Infectious diseases
1. Cystitis
2. Pylonephritis
3. Perinephritic abscess

L. Obstructions of urinary system
1. Renal calculi
2. Ureteral colic

M. Hydronephrosis

N. Traumatic injuries

O. Tumors of Urinary Tract
1. Malignant tumors
2. Wilm's tumor
3. Congenital polycystic kidneys
4. Tumors of the bladder

P. Renal failure
1. Pathophysiology
2. Treatment and Nursing care
3. Dialysis
   a. Extracorporeal hemodialysis
   b. Peritoneal dialysis
4. Renal homotransplants

Q. Patient Care Needs of Persons with Surgical Conditions of the Urinary Systems
1. Cystectomy
2. Urinary division

a. Uterosigmoidostomy
b. Cutaneous ureterostomy
c. Neobladder
d. Ileal or colonic conduit

3. Cyctotomy
4. Ureterotomy
5. Nephrectomy and nephrostomy
6. Urethral stricture
7. Congenital malformations

R. Psychosocial Aspects

UNIT XI

DISORDERS OF THE ENDOCRINE SYSTEM

General Objective

The student, after completing this unit, will be aware of the health care needs of individuals who have a disorder of the endocrine glands, and will be able to work in an educational and supportive manner with the health care team helping individuals and families to manage diabetes mellitus at home.

Specific Objectives

The student will be able to:

1. Match the name of the endocrine glands with the appropriate function.
2. List two diseases of the thyroid gland and describe the treatment.
3. Name three characteristics of hypothyroidism.
4. Name the two tumors of the thyroid gland.
5. Explain the pathophysiology of diabetes.
6. Compare and contrast insulin reaction with diabetic acidosis.
7. Name the organs where vascular complications resulting from diabetes mellitus occur.
8. Explain the affect of diabetes and pregnancy.
9. Identify the five primary symptoms of diabetes.
10. Explain the two diagnostic test utilized in determining diabetes.
11. Discuss the types of insulin and explain the purpose and action of each type and the administration.
12. Describe basic hygiene needed by diabetic persons.
13. List three causes of hypoglycimia other than diabetes.
14. Define hyperparathyoidism and hypoparathyroidism.

15. Match diseases of the adrenal glands with their appropriate definition.

16. Discuss the causes of dwarfism and gigantism.

17. Develop a home health care plan for an individual with a disease of the pituitary gland.

CONTENT OUTLINE

I. Endocrine Glands and Their Function
   - A. Thyroid gland
   - B. Parathyroids
   - C. Adrenal
   - D. Pituitary body
   - E. Gonads
   - F. Pancreas

II. Diagnostic Tests and Procedures - Purpose
   - A. Blood Chemistry
   - B. Urinalysis
   - C. Basal Metabolic Rate
   - D. Protein Bound Iodine
   - E. Radioactive Iodine Uptake

III. Diseases of the Endocrine System
   - A. Diseases of the Thyroid
     1. Simple endemic goiter
     2. Hyperthyroidism
     3. Medical Treatment
        - a. Antithyroid drugs
        - b. Quiet restful environment
        - c. High-calorie diet
     4. Thyroidectomy
     5. Hypothyroidism
        - a. Myxedema
        - b. Juvenile myxedema
        - c. Cretinism
     6. Tumors of the thyroid
        - a. Nodular goiter
        - b. Carcinoma of thyroid
   - B. Diseases of the pancreas
     1. Diabetes mellitus
        - a. Pathophysiology
        - b. Five basic symptoms
        - c. Diagnostic tests
          1. Urine testing
          2. Blood glucose determination
          3. Glucose tolerance test
        - d. Diet
          1. calculated, non-calculated
          2. vomiting

e. Insulin - purpose
   1. Regular crystalline, zinc, and semilente insulin are fast acting
   2. Intermediate acting are, Globin, NPH, and Zinc
   3. Protamine zinc and ultralente insulin all long lasting
   4. Insulin units per milliliter: U40, U80, U100
   5. 26 gauge needle, 1/38 to 1/2 inch length
   6. Syringe should correspond to units per milliliter
   7. Rotate injection agents

f. Oral Hypoglycemic agents
   1. Sulfonicurcas
      a. Talbutaminde (Orinase)
      b. Chlorpropamide (Diabinese)
      c. Acetohexamide (Dymelor)
      d. Toluzamide (Tolinase)
   2. Biguamide Compounds
      a. Phenformin (DBI)
      b. DBI-TD long-lasting form

g. Hygenic
   1. Foot care
   2. Exercise
   3. Sleep and rest

h. Diabetic acidosis
   1. Gradual onset
   2. Ignorance or neglect
   3. Failure to check urine
   4. Omission of urine
   5. Infection with derivation of temperature
   6. Some condition within body causing resistance to insulin
   7. Not receiving proper insulin

i. Insulin reactions
   1. Rapid onset
   2. The result of a drop in glucose level
   3. Caused by
      a. Omitting a meal
      b. Loss of food by vomiting
      c. Excessive exercise
      d. Exposure to extremes of cold
      e. too much insulin

j. Vascular complications occur in
   1. Eyes
   2. Kidneys
   3. Nervous system
   4. Skin

k. Diabetic persons should know
   1. Diabetes is a chronic condition to live with for remainder of one's life
   2. Home health care giver will be expected to reinforce much of the teachings needed for home management of diabetes

1. Diabetes and pregnancy
    1. More likely to have complications
    2. Diet and insulin must be more rigidly controlled
    3. Close medical supervision essential
    4. If complications occur delivery may be difficult

C. Hypoglycemia - can occur when diabetes is not present
    1. May be caused by disease of the liver, pancreas or of pituitary of adrenal glands
    2. Functional hypoglycemia - causes unknown

D. Diseases of Parathyroid Glands
    1. Hyperparathyroidism - excessive secretion of parathormone
        a. results in removal of calcium from bones with increase in blood
        b. Small tumors may form in bones and spontaneous factures may occur
    2. Hypoparathyroidism - not enough parathromone affects nerves, muscles, loss of coordination, and muscle spasm

E. Diseases of the Adrenal (suprerenal) gland
    1. Adrenal cortex - secretes several hormones
    2. Medulla - produces epinephrine and noepinephrine
    3. Addison's disease - hypofunction of the adrenal cortes
        a. Causes gastrointestinal disorders, hypoglycemia and fluid and electrolyte imbalance
        b. Addison's crises
    4. Cushing's syndrome - hyperfunction of adrenal cortex Causes weakness, muscle wasting, abnormal fat accumulation, hemorrhage tendencies, changes in sex characteristics, fluid and electrolyte imbalances. When chronic diseases are treated with steriods, Cushing's syndrome may occur
    5. Pheochromocytoma, tumor of the adrenal medulla, symptoms caused by hypersecretion of epinephrine and norephine-phrine. Treatment surgical.

F. Diseases of Pituitary Gland (master gland)
    1. Interior lobe secretes unknown number of hormones
    2. Posterior lobe secretes two hormones
    3. Too much growth hormone secreted by the anterior lobe in a child caused gigantism. Accromegaly in adult caused by tumor of certain cells.
    4. Dwarfism is the result of too little secretion of growth hormone, midgets, in children.
    5. Pituitary body exerts control over and influences other endocrine glands.

UNIT XII

DISORDERS OF THE NERVOUS SYSTEM

General Objective

After completion of this unit the student will be knowledgeable about the health care needs of an individual with a neurologic disorder, will be able to refer this individual to the appropriate community resource or agency for assistance in meeting these health care needs, and will be able to work in an educational or supportive manner with a health care team.

Specific Objectives

The student will be able to:

1. Match the appropriate anatomical structure of the nervous system with appropriate description or function.
2. Define lumbar puncture and cisternal puncture.
3. Match the name of a neurological examination with the correct discription.
4. List and discuss the five infectious diseases of the nervous system
5. List and discuss the five levels of consciousness.
6. Name the three degenerative diseases of the nervous system and explain the causes of and treatment for each.
7. Discuss the pathophysiology, treatment, and rationale for proper positioning for individuals who have suffered a CVA.
8. Discuss the treatment needed for a person having a convulsion, differentiate between a grand mal and a petit mal seizure and conditions that convulsions are usually associated with.
9. Discuss patient care needs of individuals who have a concussion.
10. Discribe and name the three neuritis and neuralgia conditions.
11. Explain why proper first aid and proper positioning are important in spinal injuries.

12. Define laminectomy and its relationship to a "ruptures disk".

13. Give five characteristics about tumors of the brain and spinal cord.

CONTENT OUTLINE

I. Major Anatomical Structures of the Nervous System and Their Function
   - A. Coordinates functions of the body
   - B. Consists of brain, spinal cord, nerves, and related structures
   - C. Central nervous system, brain and spinal cord
   - D. Peripheral nervous system - cranial and spinal nerves
     1. (12) pairs of cranial nerves
     2. (31) pairs of spinal nerves
     3. Peripheral nervous system
        - a. Autonomic nervous system
          1. Sympathetic nervous system - accelerates
          2. Parasympathetic nervous system - slows
   - E. Brain
     1. Cerebrum - largest part, right and left hemispheres
     2. Cerebellum - next largest
     3. Medulla - some nerves cross in medulla
     4. Ventricles - in each hemisphere filled with spinal fluid
   - F. Meninges - membranes covering brain and spinal cord
   - G. Spinal fluid
     1. Provides soisture
     2. Lubricates
     3. Protects brain and spinal cord
   - H. Diagnostic tests and procedures
     1. CAT scan
     2. Ventriculography
     3. Pneumoencephalography
     4. Myelography
     5. Electroencephalography
     6. Brain Scan
     7. Queckenstedt's sign
   - J. Pain - general facts
   - K. Levels of consciousness
     1. Confusion
     2. Delirium
     3. Stupor
     4. Coma
     5. Convulsions
   - L. Infectious disesases of the Nervous System
     1. Meningitis - spinal meningitis
        - a. Spinal meningitis
        - b. Cerebrospinal meningitis
     2. Encephalitis
        - a. Pathophysiology
        - b. Viral encephalitis

3. Poliomyelitis
4. Central nervous system eyphilis

M. Poliomyelitis - causes by three viruses that affect spinal cord
1. Sabin vaccines
2. Bulbar poliomyelities occurs when brain and cranial nerves are affected
3. Isolate for 7 days
4. Patient may need emergency tracheostomy, suction equipment and oxygen and respirator care

N. Central Nervous System Syphilis - caused by Treponemia pallidum
1. Meningovascular syphilis - affects meninges of the brain and may be acute or chronic
2. Tabes dorsalis (locomote ataxia) affects sensory nerve roots in spinal cord
3. General paresis - lesions on brain cells; deterioration and atrophy occur
   a. Taboparesis is a condition in which both general paresis and tabes dorsalis are present.
4. Prevention through early treatment of syphilis

O. Degenerative diseases
1. multiple sclerosis (disseminated sclerosis) affects myelinsheaths of nerve fibers
   a. Cause unknown. Symptoms are loss of visual acuity. weakness, double vision, and nystagmus: complete paralysis may result.
2. Parkinson's Disease (paralysis agitans)
   a. Progressive chronic disease
      1. Causes unknown usually
      2. Tremor and disturbance of gait
   b. No cure - treatment symptomatic, supportive, and palliative
      1. T-dopa may relieve symptoms but no cure
      2. Surgery in some cases
3. Myasthenia gravis - deficiency in neuromuscular transmission
   a. Too much acetyocholine or too much cholinesterase at nerve endings
   b. Muscles weakness affects all muscles except bladder, stomach and heart
   c. no cure
   d. Patient care needs
      1. Simple activities - tiring
      2. Mechanical assistance may be useful
      3. Anticholinesterase drugs

P. Cerebral Vascular Accident (CVA) apoplexy or stroke
1. Caused by cerebral thrombosis, cerebral hemorrhage, or cerebral embolus
2. Symptome, seldom warning signs, may have transient cerebral ischemic attacks prior to CVA
3. Loss of consciousness, hemiplegia, aphasia may occur
4. Treatment emphasis is restorative care and rehibiliation
5. Survival is the immediate concern in the acute stage
6. Positioning

a. Hemiplegia is paralysis of leg and arm on same side
b. Positioning important
1. To prevent contractures
2. To improve circulation
3. To prevent dependent edema
4. To facilitate breathing
5. To prevent decubitus ulcers

7. Aphasia - there is damage to speech areas in brain and the patient is unable to speak
a. Receptive
b. Expressive
8. Rehabilitation - family needs to understand patient and know what to expect

Q. Convulsive Disorders - epilepsy, occurs with many illnesses and neurologic conditions
1. Febrile convulsions - these convulsions may occur in children with a elevated temperature
2. Convulsions may be associated with infections of the brain, metabolic disturbances, congenital malfomations, CVA, head injuries, or brain tumor
3. Grand mal seizures - severe convulsions with loss of consciousness
4. Petit mal seizures - monentary loss of consciousness
5. Psychomoter attacks - automatic behavior without memory or loss of consciousness
6. Treatment individualized
7. Special health care needs
a. Lonely, need understanding
b. Social aspect
c. Protection from injury during convulsion
d. Do not restrain
e. Ensure privacy
f. Observe patient during seizure

R. Head injuries
1. Concussion occurs when brain is shaken violently against skull
2. May be minor, moderate, or severe and usually unconscious for a varying period of time
3. Need constant observation during the first 48 to 72 hours

S. Neuritis and Neuralgia
1. Polyneuritis (multiple neuritis) involves peripheral nerves.
2. Neuralgia - severe pain along route of nerve
a. Intercoastal neuralgia occurs along the intercoastal nerves in the thorax.
b. Sciatic neuralgia is inflammation and pain along the sciatic nerve
c. Trigeninal neuralgia (tri douloureux), facial neurlgia involving branches of fifth cranial nerve

T. Bell's paralysis of Bell's palsy affects branches of seventh cranial nerve and may be associated with trigeminal neuralgia

U. Spinal Injuries
1. Proper positioning at the scene of an accident is very important to provent serious complications

2. Position for proper alignment and spine support
3. Care of patient is directed toward specific symptomatic treatment and preventing complications
4. Complete severence of spinal is complete transverse myelitis
5. Paralysis of all four extrmeties is quadriplegia
6. Daily care
7. Drugs for pain relief
8. Elimination
9. Diet high in protein, calories, and vitamins
10. Rehabilitation - assist individual to obtain optinal physical and mental function

V. Rupture of intervertebral disk - many cause pressure on nerves and cause neurologic symptoms
   1. Surgery if nurologic symptoms are severe
   2. Laminectomy - surgical procedure to remove bone, cartilage, projecting intervertebral disk or tumor

W. Tumors of brain and spinal cord
   1. May be malignant with poor prognosis
   2. Benign tumors may have favorable prognosis is location permits surgical removal
   3. Primary tumors in brain do not metastasize outisde brain
   4. Tumors of spine may be primary tumors or result of metastasis
   5. Craniotomy surgical openings through cranium for purpose of removing tumor or for exploration

UNIT XIII

DISORDERS AND DISEASES OF THE SKIN

General Objective

The student, after completing this unit, will be knowledgeable about the health care needs of an individual who has an infectious or non-infectious skin lesion or a serious burn. The student will be able to work with an individual or a family in an educational or supportive manner to recover to their optional potential.

Specific Objectives

The student will be able to:

1. Review the layers of skin and list five general functions of skin.
2. Explain eight causes of skin diseases.
3. Name four diagnostic tests or procedures that are used to diagnose skin lesions.
4. Discuss the use of therapeutic baths, wet dressings, soaks, and paste boots in the treatment of skin lesions.
5. Give examples of bacterial skin diseases and fungus skin diseases and explain each.
6. Discuss dermatitis and its associated health care needs.
7. Match the terms psoriasis, eczema, and acne valgris with the appropriate description.
8. Compare and contrast herpes simplex with herpes zostec.
9. Define and explain "liver spots".
10. Define and explain "wen".
11. List four causes of anhidrosis
12. Give examples of benign and malignant skin tumors.
13. Define alopecia, hypertrichosis, hypotrichosis, and scabies.

14. Name and define three types of lice.

15. Discuss causes of burns, classidication of burns, initial treatment for burns and method of skin grafting.

CONTENT OUTLINE

I. Functions of Skin
   A. Provides protective covering
   B. An organ of secretion
   C. Regulate body temperature
   D. Provides information about environment
   E. Contributes to psychologic and mental health

II. Causes of Skin Diseases
   A. Malfunctioning of other organs of systems
   B. Allergic conditions
   C. Side affects from drugs
   D. Chemicals biologics, mechanical injury
   E. Heat and Cold
   F. Nutritional indiscretions and deficiencies
   G. Invasion by pathogenic organisms
   H. Normal aging process

III. Characteristics of Skin Lesions

IV. Diagnostic Tests and Procedures
   A. Diagnosed by careful history, general appearance, and distribution of lesions
   B. Bacteriologic study
   C. Biopsy for pathologic examination
   D. Examination of blood and urine

V. Specific Aspects of Treatment and Relief of Symptoms
   A. Therapeutic baths
      1. Disinfection and deodorizing
      2. Relief from pruitius
      3. Soathing effects
      4. Softening and lubricating skin
   B. Substances used
      1. Soaps, oils, medications
      2. Oatmeal, bran, starch, baking soda, or combination
   C. Wet dressings
      1. Cooling effects
      2. Relief pruituis
      3. Dressings may be open, closed, hot or cold
         a. Physiologic saline solution
         b. Boric acid solution
         c. Magnesium sulfate solution
         d. 0.5% aluminum acetate solution
         e. 1.4000 potassium permanganate solution

D. Soaks may be used to loosen necrotic tissue and to promote supporation
E. Paste boots - commercial preparation of water, gelatin, glycerin, and zinc oxide
F. Emotinal needs of individuals with skin disorders
G. Bacterial Diseases
   1. Furnuncles, carbuncles, and felons
      a. Furuncles - originate avout hair follicles and are caused by staphulococcus
      b. Carvuncles - occur when infection infiltrates into surrounding tissues causing several boils caused by staphulococcus
      c. felon - infection of end of finger caused by streptococcus
   2. Impetigo contagiosa - superificial contagious skin disease caused by staphulococci and streptococci
H. Fungus Infections
   1. Tinea capitis - ringworm of the scalp
   2. Tinea circinata - ringworm that occurs on non-hairy parts of the body
   3. Tinea sycosis (barber's itch) - occurs in beard may involve cervical lymph nodes
   4. Tinea pedis - contagious disease of the feet
   5. Treatment and prevention
I. Dermatitis of skin, inflammatory condition of the skin resulting from several causes
   1. Erythema impertigo, chafing
   2. Miliaria, prickly heat
   3. Dermatitis venenata (plant poisoning) occurs from contact with poison ivy, poison oak, poison sumac, poison elder
   4. Exfoliative dermatitis - several causes, sommonly caused by drugs containing heavy metals
   5. Dermatitis medicamentosea, skin disorders caused by drugs
   6. Psoriasis, incurable skin disease with unknown cause. Characterized by remissions and exacerbations, may be accompanied by form of arthritis, no specific treatment
   7. Exzema, many causes, exhibits many different types of skin lesions
   8. Acne vulgaris, adolescent condition thought to be caused by increased hormanal activity usually self-limiting, disappears by adult life, nonspecific treatment but may interfere with personality development
J. Viral Infections
   1. Herpes simplex, caused by virus, self limiting
   2. Herpes zoster, lesions located in spiral ganglia with involvement of skin supplied by nerve fibers
      a. Thought to be caused by a virus
      b. Skin lisions in thoracic area
      c. Depression
      d. If lesions are on the face observe for facial paralysis and disturbance of vision and hearing

K. Disorders of Pigmentation
   1. Lentogo (freckles)
   2. Chloasma (liver spots) not caused by liver disease and may occur during pregnancy or menopause

L. Disorders of Glands
   1. Seborrhea (oily skin) excessive secretion of oil glands (sebum)
   2. Sebaceous cyst (wen) often occurs on scalp and is caused by increased of sebum and obstruction of duct
   3. Hyperhidrosis (excessive sweating)
      a. Tuberculosis and hyperthyroidism
      b. Severe pain
      c. Shock
      d. Toxic conditions and fevers
      e. Antipyetic drugs
      f. Extremes of heat
      g. Severe physical exercises
   4. Anhidrosis (absences of sweating)
      a. Aging process
      b. Various skin diseases
      c. Administration of certain drugs
      d. Diabetes, hypothyroidism and nephritis

M. Pruritius (itching) - a symptom that accompanies many disorders and complications. May occur from scratching the skin

N. Tumors of the skin
   1. Benign tumors
      a. Keloid, tumor mass occuring at site of scar that consists of overgrowth of fibrous tissue, common in blacks
      b. Angioma, benign skin tumor consisting of dilated blood vessels
         1. Congenital birthmark or port wine stain
         2. Spedic angina occurs in persons with liver disease
         3. Nevus (mole), nonvascular tumor that may be pigmented, there are many different types. Black moles may become malignant if irritated
         4. Venuca - benign tumor of the skin
         5. Keratosis - when seen in the elderly may be precancerous
   2. Malignant tumors - develop from precancerous skin lesions exposed to irritations Carcinoma of skin responds to treatment by X-ray or radium therapy.

O. Alopecia - loss of hair may be the result of normal thinning with age, debilitating disease early syphilis

P. Alopicia areata - sudden loss of hair with spontaneous recovery

Q. Hypertrichosis - excessive growth of hair that may be congenital or acquired and often results from endocrine disturbance

R. Hypotrichosisis - absence or deficiency of hair that may be skin disease or result of endocrine factors

S. Nails, may indicate disease elsewhere in the body or be the result of congenital defects. Fungus infections of the nails responds poorly to ordinary methods of treatment

T. Pediculi (lice)
   1. Pediculus corpotus - head louse
   2. Pediculus corporis - body louse
   3. Pediculus pubis - found in short, stiff, hair such as the genital area, eyebrows, and eyelashes

U. Scabies (itch) - infectious skin disease caused by parasite that burrows under skin causing itching

V. Burns - caused may be dry or moist heat, electricity, chemicals, or radiant energy
   1. Burns classidied by depth of brun
      a. First degree
      b. Second degree
      c. Third degree
      d. Fourth degree
      e. Segmental charring
      f. Rule of nine used to estimate extent of burn
      g. First aid - apply cool water, wrap in clean sheet and take to hospital
      h. Initial patient care needs
         1. Observe for shock and attempt to prevent shock
         2. Give intravenous fluids
         3. Remove debris of loose skin
         4. Analgesics, antibiotics, and tetanus prophylaxis
         5. Small minor burns cool off skin by running cool water over burn
      i. Goals of treatment are
         1. To save patients life
         2. To prevent infection
         3. To restore normal function and appearance
      j. Methods of treatment
         1. Sulfamylon, acetate, exposure method
         2. Silver nitrate method
         3. Occlusive dressing
      k. Intake, output measurements
      l. Position the patient
      m. Prevent infection
      n. Relieve pain
      o. Diet
      p. Emotional support necessary for recovery and rehabilitation
      q. Skin grafting - graft is living tissue that is transplanted to another area of the body
         1. Autograft, from same person to whom it is to be transplanted
         2. Homograft, donor is person other than recipient
         3. Heterograft or xenograft, donor is animal, usually a pig
         4. Split thickness type methods for grafted area and donor area

UNIT XIV

DISORDERS AND DISEASES OF THE MUSCULOSKELETAL SYSTEM

General Objective

After completion of this unit the student will be aware of the health care needs of an individual or a family who has a disease or disorder of the musculoskeletal system, and will be able to work in an educational and supportive manner with a health care team.

Specific Objectives

The student will be able to:

1. Identify the six major structures of the musculoskeletal system.
2. List the five major functions of the musculoskeletal system.
3. State five considerations about cast care.
4. Name four reasons why traction may be applied.
5. Differentiate between skin traction and skeletal traction.
6. List the three types of traction.
7. Name four types of frames used with musculoskeletal problems.
8. State the purpose for applying splints.
9. Identify three musculoskeletal congenital deformities.
10. Explain the three major types of arthritis and the treatment of each.
11. Define gout and discuss its treatment.
12. Explain tuberculosis of bone, affected age groups, and its treatment.
13. Name six traumatic common musculoskeletal injuries and define each.
14. Explain whiplash injuries, its causes, symptoms, and treatment.

15. Name three aspects of care needed for amputated limb.

16. Identify the muscles affected by muscular dystrophy

17. Define cerebral palsy.

CONTENT OUTLINE

I. Review Anatomy, Physiology of the Musculoskeletal System
   A. Musculoskeletal system-composed of bones, joints, muscles, ligaments, tendons and cartilage
   B. Bones, composed of living cells and a calcified intercellular substance. May be long, short, irregular or flat in shape.
   C. Long bones are made up of six parts, diaphysis, epiphysis medullary (marrow) cavity, endosteum, periosteum, and articular cartilage
   D. Joints may be freely movable, slightly movable or immovable
   E. Body movement depends on action of bones and muscles
   F. Function of the Musculoskeletal System
      1. Locomotion
      2. Supports an upright position
      3. Protects vital organs
      4. Blood cells formed in bone marrow
      5. Deposits calcium for use in deficiency
   G. Techiques to prevent contractures, deformitites and to maintain muscle tone
      1. Proper positioning of patient
      2. Passive and active exercise
      3. Regular turning
         a. Turning patient 12 degrees is sufficient to prevent pulmonary complications, stimulate circulation and prevent decubiti
      4. Tilt table, prepares patient for upright position
      5. Proper body mechanics, conserves energy, prevents muscle strain, prevents fatigue, and allows for more efficient work.
   H. Individuals in bed at home in a cast
      1. Use bed boards and firm mattress
      2. Cast care
         a. Keep clean and dry
         b. Protect from soiling around the genital area
         c. Keep raw edges bound
         d. Handle carefully to avoid creacking or healing
   I. Removal of Cast
      1. Cast may be bivalued; shell may be used for a few days
      2. Support extremity carefully
      3. Skin may be washed with warm water and soap; apply oil and massage gently

4. Elastic bandage may be applied
5. Exercises may be needed to strengthen muscles

J. Traction May be Applied to Extremities, Cervical Region or Pelvic Region
   1. To relieve muscle spasm
   2. To keep bones in place while healing
   3. To reduce dislocation
   4. To correct or relieve contractures

K. Skin traction, adhesive substance applied to clean dry skin

L. Skeletal traction uses pins, wires, crutchfild tongs, etc., general care of

M. Kinds of traction
   1. Bryant's traction - used for children with fracture of the femur
   2. Buck's extension - may be adapted for home use
   3. Russell traction - allows more freedom of movement

N. Frames
   1. Balkan frame
   2. Bradford frame
   3. Stryker frame
   4. Foster frame

O. Splints - used for immobilization and may be used with traction

P. Other orthopedic devices, crutches, braces, waking heel or iron neck supports. corsets, and back braces

Q. At home health care needs

R. Diseases and Disorders of the muscloskeletal system
   1. Congenital defomities - may affect bones, joints, or muscles
      a. club foot, may affect one or both feet and may be mild or severe. Treated with exercise and application of plaster casts
      b. Torticallis (wryneck) shortening of the stern-sleidomastoid muscle fibers. Treatment includes heat, massage, stretching, and sometimes surgery, condition may be treated with cast.
      c. Dislocation of hip, may affect one or both hips. Treat with pillows or splints to keep legs in abduction, application of cast, and use of abduction bar after cast removal.
   2. Arthritis, rheumatic disorder resulting in inflammation of joints and adjacent tissue
      a. Rheumatoid arthritis and rheumatoid spondylitis are the most serious forms and lead to crippling; no known cure
      b. Care is directed towards maintaining function, releiving pain, and preventing deformities
      c. Treated with hot moist packs, hot tub bath, electric blanket, heat cradles, paraffin baths, active exercise, and asprin for relief or pain.
      d. Anti-inflammatory and analgesic drugs are used.

UNIT XV

DISORDERS AND DISEASES OF THE EYE AND EAR

General Objective

After completion of this unit the student will have an understanding of eye and ear disorders and diseases. The student will be able to utilize this knowledge to assist health care providers helping persons in the community to manage eye and ear disorders and diseases at home.

Specific Objective

The student will be able to:

1. Match the structures of the eye and ear with their appropriate function.
2. List three tests utilized to determine acuity of vision and eye disease.
3. Name three types of hearing tests.
4. List and explain five causes of blindness.
5. Discuss the causes of hearing loss, the classifications of hearing loss, theypes of hearing loss, and the three major parts of hearing aids.
6. Explain the five major refractive errors of the eye.
7. Administer eyedrops, ointments, ear and eye irrigations, and apply hot or acid compresses.
8. Match the name of the infectious eye disorder with the appropriate definition.
9. Explain the four major noninfectious eye disorders and give the treatment for each.
10. Describe the four major types of injuries to the eye.
11. List the three major infections of the external ear and explain each.
12. List three major causes of perforation of the middle ear.
13. Explain the three major types of infections of the middle ear and the treatment for each.

14. Explain the two major disorders of the inner ear and the treatment for each

CONTENT OUTLINE

I. Structure and Function of the Eye and Ear
   A. Eye
      1. Coats, Sclera, Choroid, and Retina
      2. Iris - colored part, pupil in center
      3. Lens - behind the pupil
      4. Vitreous humor, fills large chamber behind eye
      5. Acqueous humor, fills chamber in front of eye
      6. Extrinisic and intrinisic muscles control movement and hold eye in position
      7. Accessory organs - eyebrows, eyebrows, eyelids; eyelashes, conjunctiva, lacrimal glands and ducts, and sebaceous glands
      8. Visual center in brain
   B. Ear
      1. External parts - auditory canal, pinna, and tympanic membrane
      2. Middle ear - contains oval and round windows, malleus, incus, and stapes
      3. Inner ear - bony labyrinth, cochlea, semicircular canals, membranous labyrinth contains saccule and utricle fluids in inner ear are endolymph and perilymph
      4. Auditory center for hearing in temporal lobe of cerebrum

II. Diagnostic Test and Procedures
   A. Eye examinations to determine acuity of vision and eye disease.
      1. Snellen eye chart, commonly used screening examination
      2. Tonometry - measurement of intraocular pressure.
      3. Ophthalmoscope, instrument to permit visualization of inside of eye
   B. Hearing tests
      1. Voice test, uses whispered or spoken voice and is used as screening test
      2. Audiometer - measure learming in both pitch and in intensity and is both quantititive qualitative measurement of hearing
      3. Tuning forks, helpful in determining type of hearing loss
      4. Testing hearing in young children
   C. Loss of vision - may be caused by diet, poisons, injury, excessive use of oxygen in premature nursery or may be genital
   D. Loss of hearing - may be congenital or acquired
      1. Classification
         a. Hard of hearing
         b. Deaf
      2. Types
         a. Senorineural

b. Conductive

3. Hearing aids
   a. Microphone
   b. Amplifier
   c. Reveiver

III. Refractive Errors of the Eye
   A. Refraction - bending of light rays entering eye so that they fall on retina; term also applies to fitting glasses to correct error of refraction
   B. Myopia - defect in which light reays focus too soon or in front of retina
      1. Distant vision will be blurred
      2. Myopia may become progressively worse in young person
   C. Hyperopia - farsightedness, defect in which point of focus is behind retina
      1. Near vision will be blurred
      2. Testing with Snellen eye chart may not show condition
   D. Astigmatism - irregularity in curvature of cornea or lens so that all light rays do not blend equally
   E. Strabismus - crossing of eyes, may be congenital or acquired
      1. Convergent stragismus - eye turns toward nose
      2. Divergent strabismus - eye turns outward
      3. Classification
         a. Paralytic strabismus, when nerve is damaged
         b. Nonparalytic strabismus, inherited disorder
      4. Treatment, may be both medical and surgical
   F. Contact lenses - small, thin, polished plastic disk, that is held in place in the eye by capillary attraction and the upper eyelid

IV. Color Blindness - may be congenital or acquired, partial or complete and is most commonly red-green

V. Specific Aspects of Care for Persons With An Eye Disease or Disorder
   A. Instillation of eyedrops and ointments
   B. Eye and ear irritations
   C. Hot or iced compresses
   D. Absolute cleanliness of hands and equipment

VI. Common Inflammatory and Infectious Eye Disorders
   A. Styles (hirdeika), small boils or abscesses from infection of hair follicles, can become chronic with frequent recurrence
   B. Conjunctivitis, inflammation of conjunctiva of eye
      1. Acute prevalent conjuctivitis (pink eye) may occur as epidemic in school children
      2. Gonorrheal conjunctivities, occurs in newborn as opthalmia neonatorum, in adult as gonorrheal opthalmia
      3. Thrachoma - chronic inflammation of conjuctive with formation of granules on eyelids; progresses slowly; will ultimatley lead to blindness unless treated
   C. Blepharitis - chronic inflammatory process involving margin of eyelids

D. Keratitis - inflammation of cornea
   1. Interstitial keratitis frequently accompanies congenital syphilis
   2. May result in scar formation near pupil, thus affecting vision
E. Corneal ulcers - always serious because perferation may occur
   1. Corneal transplant (keratoplasyt), involves only cornea
   2. Corneal grafts can be done only when cornea is available
   3. Postopeative care must prevent dislocating graft
F. Uveitis and iritis, inflammation of uveal tract, may involve all or part of tract
   1. Iridocyclitis, only iris and ciliary body involved
   2. Uveitis, iris, ciliary body, and choroid involved
   3. Condition serious and may cause blindness

VII. Noninfectious Eye Disorders
A. Retrolental fibroplasis - diseases of premature infants caused by excessive use of oxygen, results in partial or total blindness
B. Glaucoma
   1. Common in adults 40 years of age or older
   2. Pathophysiology, involves flow of aqueous humor outward from anterior chamber of eye; causes increased intraocular pressure.
      a. Narrow - angle type
      b. Wide - angle type
      c. May be primary or secondary
      d. Cause is unknown
C. Cataract
   1. Pathophysiology, slow progressive disorder causing opacity of lens of eye
   2. Results in impairment of vision
   3. Classified as developmental and degenerative
   4 Senile cataract occuring after 70 years of age is most common form and results from normal aging process
   5. Treat by surgical removal of the cataract, the only cure. Intracapsular extraction is most common procedure

VIII. Retinal Detachment, Separation of Retina from Choroid. Corrected by surgical procedure. Surgery not always successful may have to be repeated.

IX. Injuries to the Eye
A. Irritation by foreign bodies, among most common types of injury and may be caused by dust, loose eyelashes, or cinders
B. Burns caused by acids, alkalies, hot metal, flashes from acetylene blow torches and exposure to ultraviolet rays of sun should by considered an emergency.
   1. Acid burns may be irrigated with boric acid solution
   2. Tap water may be used
C. Abrasions and lacerations may be extremely serious and may aggect vision or result in loss of eye

D. Penetrating wounds are especially serious because they introduce infection
   1. Eye enucleation may be necessary because of injury, pain, malignant tumors, or for cosmetic purposes

X. Diseases and Disorders of the Ear
   A. External Ear
      1. Infections
         a. Boils in auditory canal are common
         b. Fungus infections occur rarely
         c. Various forms of dermatitis may cause infection of external ear
      2. Obstructions
         a. Children putting foreign objects into the ear
         b. Accumulation of wax in ear
      3. Injury may result from skull fracture, severe blow on ear or otitis media
   B. Middle ear
      1. Otitis media, prevalent
         a. Formation of abscess in middle ear
         b. Danger of extension of infection to mastoid places
         c. Treatment
            1. Bed rest
            2. Eardrum may rupture spontaneously or otologist may incise it to permit drainage
      2. Mastoiditis, complication of acute prevalent otitis media; surgery may be necessary
      3. Otoscloerosis
         a. New growth of bone causing footplate of stapes to become fixed in oval window, preventing sound from reaching inner ear
         b. Treatment, no medical treatment, surgery in 90% of cases will restore hearing, stapedectomy
   C. Inner ear
      1. Labyrinthitis, inflammatory condition of inner ear that may result from extension of infection of middle ear
      2. Treat with bed rest and antibiotics
      3. Meniere's syndrome, caused by increased pressure in inner ear
         a. Severe vertigo is primary symptom
         b. Provide safety for individual
         c. Treatment may be medical or sugical

II. Rheumatoid Spondylitis, Inflammation of Vertebrae and Sacroiliac Joints; May Cause Kyphosis or Humped Back
   A. Osteoarthritis, degenerative joint disease, result of normal wear and tear that occurs with aging process. Treat by reduction in weight if patient is obese, exercise and avoidance of cold and dampness, rest, and application of heat
   B. Surgical treatment of arthritis
      1. Tendon transplant
      2. Synovectomy
      3. Osteotomy
      4. Arthrodesis
      5. Arthroplasty
      6. Total joint replacement
   C. Gout, metabolic disease occuring usually in middle life. Uric acid is retained in body, treat by administering colchicine for relief of pain. Tophi are deposits of uric acid in various parts of the body.
   D. Buristis - inflammation of bursae, treat with therapy or hydeocortisone injected into bursae, analgesic drugs, rest and support. Calcium deposits may have to be surgically removed.

III. Infectious Diseases
   A. Ostemyleitis, inflammation of bone, if chronic may occur throughout life. Treatment may be surgical or with antibiotics or immobilizations: no uniform method of treatment
   B. Tuberculosis of bone, occurs primarily in children
      1. Patt's disease, tuberculosis of the spine, usually affects lower dorsal or upper lumbar region
         a. May result in softening of bone with destruction and deformity
         b. Treatment is absolute immobilization of spine by casts, braces, the use of frames and antituberculosos drugs
         c. Surgery may be necessary
      2. Tuberculosis of hip may affect very young child, treatment is by immobilization and surgery

IV. Traumatic Injuries
   A. Contusions, like bruises if bleeding is severe and may cause hematoma
   B. Sprains, involve twisting or wrenching of ligaments, tendons, or muscles
   C. Dislocation, may be congenital or result from disease of injury: temporary displacement of bone occurs, manual manipulation under general anesthesia is usually necessary, followed by immobilization with splints or casts
   D. Fractures are the result of violent external force, of disease, or of decalcification in aged persons
      1. Classification of fractures
         a. Greenstick, incomplete break
         b. Comminuted, splintered bone
         c. Compound, bone completely broken and protudes through break in the skin

d. Sprial, twisting of bone with longitudinal or oblique fracture
e. Impacted or compression, one end of bone is driven into other end

E. Fractures are treated by open or closed reduction. Traction or cast may br used.

F. Fractures of the hip, usually treated by internal fixation, nailing, or prostesis.
1. Permits earlier ambulation
2. Fewer complications
3. Return to work sooner
4. Health care needs
a. Change position from side to side
b. Support to provide good body alignment
c. Intake and output needs
d. Exercise
5. Prostetic device may be used
a. Progress to weight bearing in 10 to 14 days
6. Whiplash injuries - result of automobile accident with rear-end collision
a. May cause compression fracture of cervical vertebrae or tearing of muscle and ligaments
b. Symptoms may be delayed several days
c. Treatment includes heat, massage, and cervical traction; patient may be fitted with neck support

V. Rickets - disease occurring in infants and young children because of lack of vitamin D.

VI. Bone tumors, may be primary or secondary, benign or malignant
A. Benign tumors do not metastasize to other parts of the body
B. Malignant tumors, several types may be primary and metastasize to other tissues
C. Malignant tumors may be the result of metastasis from other parts of the body
D. Treatment depends on type, location, extent of involvement, and lesions elsewhere in body
E. Amputation of extremity may be necessary in some types
F. Care of stump at home
1. Proper bandaging
2. Reduce swelling
3. Keep clean and dry
4. Phantom pain
5. Exercises, balancing, crutch walking

VII. Muscular Dystrophy, Unknown Cause but Believed to be Inherited, Affects Voluntary Muscles Which Become Weak, Atrophy, and Waste Away.

VIII. Cerebral Palsy, Neuromuscular Disorder that Results in Spasticity and Involuntary Movement in Any Activity Acquiring Coordinated Action of Muscles

SECTION A
CARDIOVASCULAR SYSTEM

UNIT I

DISEASES AND DISORDERS OF THE CARDIOVASCULAR SYSTEM

General Objective

Upon completion of this unit the student will be able to work in an educational and supportive manner with a health care team which administers health care to individuals with diseases of the cardiovascular system to meet their health care needs and reach an optimum level of health.

Specific Objectives

The student will be able to:

1. Identify the major structures and functions of the cardiovascular system.
2. Describe 12 disorders of the rate and rhythm of the cardiovascular system.
3. List 7 factors which put persons at high risk for heart disease.
4. Discuss hypertension and hypertensive heart disease and its treatment.
5. Compare rheumatic fever and rheumatic heart disease and its treatment.
6. Explain coronary artery disease and its treatment.
7. Explain myocardial infarction, its diagnostic tests and treatment.
8. Describe an aneruysm and its treatment.
9. Discuss the pathophysiology, causes and treatment for congestive heart failure.
10. Describe the operative conditions of the cardiovascular system and the treatment for each.
11. Discuss rehabilitation of an individual with a disease of the cardiovascualr system, including financial, mental and emotional affects.

CONTENT OUTLINE

I. Structure and Function of Cardiovascular System
   A. Heart - four chambers
   B. Blood vessels consist of arteries, veins, and capillaries
   C. Function - pump blood

II. Lumph-Vascular System

III. Disorders of Rate and Rhythm
   A. Cardiac arrhythmias

IV. Disease of the Cardiovascular System
   A. Heart disease leading cause of death
   B. Risk factors
   C. Congenital heart disease
   D. Arteriosclerosis and atherosclerosis
   E. Hypertension and hypertensive heart disease
   F. Rheumatic fever and rheumatic heart disease
   G. Bacterial endocarditis - inflammation of lining of heart
   H. Coronary artery and heart disease
   I. Aneurysm - distention of wall of artery from disease or injury
   J. Congestive heart failure - occurs when heart can no longer do its work and is caused by underlying heart disease
   K. Heart disease complicated by pregnancy

V. Operative conditions of cardiovascular system

VI. Rehabilitation - social and economic factors

UNIT II

RED CROSS CPR MODULE:
RESPIRATORY AND CIRCULATORY EMERGENCIES

General Objective

Upon completion of this unit the student will be able to perform appropriate paraprofessional emergency first aid for respiratory failure and cardiac arrest in victims of all ages.

Specific Objectives

The student will be able to:

1. List 9 causes of respiratory failure.
2. Perform the necessary measures to determine if a person is conscious
3. Position a victim of any age so that mouth-to-mouth resuscitation can be initiated.
4. Perform the airway step in preparing a victim for mouth-to-mouth resuscitation.
5. State 3 points to remember in the head tip with neck lift step of CPR.
6. Perform properly the head tip with chin lift step in CPR.
7. Perform properly the quick step and check step of CPR.
8. Determine the pulse of a victim.
9. Give and count one breath for every five seconds in the CPR procedures.
10. Do mouth-to-mouth breathing correctly using both the head tip-neck lift and the head tip-chin lift.
11. Implement the necessary steps to remove air from the stomach of a victim.
12. Give mouth-to-stoma breathing.

13. List 5 causes of airway obstruction.

14. List 5 measures to prevent shock.

15. State how to anatomically locate the spot to perform chest compressions.

16. State the rate of chest compressions and the depth of compressions for both a child and an adult.

17. Perform CPR on victims of any age.

18. Perform the appropriate steps when changing a one rescuer CPR to a two rescuer CPR.

CONTENT OUTLINE

I. Mouth-to-Mouth Breathing
   A. Is the person conscious?
   B. Positioning the victim
   C. The airway step
      1. Head tip with neck lift
      2. Head tip with chin lift
      3. How should you tip the head?
   D. The quick step
   E. The check step
   F. Mouth-to-Nose breathing
   G. Air in the stomach
   H. Dentures
   I. Mouth-to-stoma breathing
   J. Types of airway obstruction
   K. Jutting the jaw
   L. Follow-up care

II. One-Rescuer CPR
   A. Chest compressions
   B. Finding where to give chest compressions
   C. Combining chest compressions and mouth-to-mouth breathing
   D. Checking the pulse

III. Two-Rescuer CPR
   A. Timing compressions and breaths
   B. Changing from one-rescuer CPR to two-rescuer CPR
   C. Changing places and checking the pulse
   D. Moving a victim
   E. Continuing to give CPR

IV. Care for a Choking Victim Who is Conscious
   A. Back blows
   B. Abdominal thrusts and chest thrusts
      1. Abdominal thrusts
      2. Chest thrusts

V. Care for a Choking Victim who is Unconscious
   A. Back blows
   B. Abdominal thrusts and chest thrusts
      1. Abdominal thrusts
      2. Chest thrusts
   C. Finger Sweep
   D. Crossed finger maneuver

VI. Respiratory Emergencies: Babies and Children
   A. Checking consciousness
   B. The airway step
   C. The quick step
   D. The check step
   E. Anatomic obstruction
   F. Mechanical obstruction
   G. Removing a foreign object
      1. Back blows
      2. Turning a baby over
      3. Chest thrusts
      4. Finger sweeps
      5. Give breaths

VII. CPR for Babies and Children
   A. Chest compressions
   B. Combining chest compressions and breaths

SECTION B
DISORDERS AND DISEASES OF THE REPRODUCTIVE TRACT

UNIT III

THE FEMALE REPRODUCTIVE SYSTEM

General Objective

Upon completion of this unit, the student will be able to discuss the common conditions that affect the female reproductive tract and will be able to apply this information in an educational and supportive manner in community settings.

Specific Objectives

The student will be able to:

1. List the major parts of the female reproductive system and their functions.
2. Discuss puberty, menstruation, and menopause.
3. List the 4 common disturbances of menstrual function and define each.
4. List and define 5 diagnostic tests and procedures used for the female reproductive tract.
5. Explain four common pregnancy tests.
6. Discuss dilation and curettage.
7. Match the seven conditions affecting the female external genitalia and vagina with their appropriate definition.
8. Discuss vulvectomy, implications, and therapy.
9. Discuss 3 major conditions that affect the cervix and uterus.
10. Discuss the major conditions that affect the ovaries and fallopian tubes.
11. Explain isolation perfusion technique for administering large doses of chemotherapeutic drugs.
12. Discuss the major conditions that affect the breasts.

CONTENT OUTLINE

I. Review of the Structure and Function of the Female Reproductive System
   A. Female reproductive system
   B. Puberty, menstruation, and menopause
   C. Disturbances of menstrual function
   D. Diagnostic tests and procedures

II. Common Diseases and Disorders of the Female Reproductive Tract
   A. Conditions affecting external genitals and vagina
      1. Vulvitis
      2. Vaginitis
      3. Leukorrhea
      4. Vulvovaginitis
      5. Vesicovaginal fistula
      6. Rectovaginal fistula
      7. Relaxation of pelvic musculature
      8. Malignant lesions
   B. Conditions affecting cervix and uterus
      1. Cervicitis
      2. Uterine displacement
      3. Endometriosis
      4. Tumors
   C. Conditions affecting ovaries and fallopian tubes
      1. Cysts and tumors
      2. Salpingitis
      3. Treatment and nursing care
   D. Conditions affecting the breast
      1. Acute mastitis
      2. Chronic cystic mastitis
      3. Tumors

UNIT IV

THE MALE REPRODUCTIVE SYSTEM

General Objectives

Upon completing this unit, the student will be able to discuss the common conditions that affect the male reproductive tract and will be able to apply this information in an educational and supportive manner in community settings.

Specific Objectives

The student will be able to:

1. List the major anatomical structures and explain their function in the male reproductive tract.
2. List and explain the 3 major conditions that affect the male external genitals.
3. List and explain the 4 major conditions that affect the testes and adjacent structures.
4. Discuss the 4 major conditions that affect the prostate gland.

CONTENT OUTLINE

I. Review of the Structure and Function of the Male Reproductive System
   - A. Scrotum
   - B. Glans penis
   - C. Function

II. Examination of male patient
   - A. Physical examination of external genitals
   - B. Examination of semen
   - C. Massage of prostate gland, and urine specimen collected for cytologic examination
   - D. Biopsy of prostate gland or testicles

III. Conditions affecting male external genitals
   A. Congenital malformations
   B. Cryptorchism
   C. Penile ulcerations

IV. Conditions affecting testes and adjacent structures
   A. Epididymitis
   B. Orchitis
   C. Hydrocele
   D. Tumors

V. Conditions affecting prostate gland
   A. Acute prostatis
   B. Cancer of prostate
   C. Benign prostatic hypertrophy
   D. Prostatectomy

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UNIT V

SEXUALLY TRANSMITTED DISEASES

General Objective

Upon completion of this unit the student will be able to provide community education about sexually transmitted diseases and assist community health care teams in a supportive manner in follow-up care of individuals.

Specific Objectives

The student will be able to:

1. Discuss the demography detection and prevention of sexually transmitted diseases.
2. Explain the historical and societal connotations of sexually transmitted diesease.
3. State the name of the causative organism of gonorrhea and explain how the organism is transmitted.
4. List 3 symptoms of gonorrhea and discuss the treatment and follow up care for gonorrhea.
5. Explain the transmission of and state the causative organisms of PID.
6. Discuss the treatment and follow up care needed for PID.
7. Discuss the transmission of, name the causative organism, the symptoms, the diagnostic test, the treatment of and the follow up care for clients with herpes genitalis.
8. List the name of the causative organism for condylomata acuminata.
9. Discuss the symptoms, treatment and follow up care needed for clients with condylomata acuminata.
10. Identify the causative organism, list the symptoms, and discuss the treatment for pediculosis pubis.

CONTENT OUTLINE

I. Demography, Detection, and Prevention of Sexually Transmitted Diseases

II. Historical Interpretations and Connotations of Venereal Disease

III. Current Approach to Management of Sexually Transmitted Diseases

IV. Gonorrhea
- A. Causative organism and transmission
- B. Symptoms and diagnostic tests
- C. Treatment and follow-up care

VI. Syphilis
- A. Causative organism and transmission, residual affects
- B. Symptoms and diagnostic tests
- C. Treatment and follow-up care
- D. Syphilis during pregnancy

VII. Herpes Genitalis
- A. Causative organism and transmission and residual affects
- B. Symptoms and diagnostic tests
- C. Treatment and follow-up care

VIII. Condylomata Acuminata
- A. Causative organism, transmission and residual affects
- B. Symptoms and diagnostic tests
- C. Treatment and follow-up care

IX. Pediculosis Pubis
- A. Causative organism, transmission, and residual affect
- B. Symptoms and diagnostic tests
- C. Treatment and follow-up care

SECTION C
MATERNAL AND CHILD HEALTH

UNIT VI

THE PERIOD OF PREGNANCY, PARTURITION, AND POSTPARTUM

General Objective

Upon completion of this unit, the student will be able to provide educational and supportive services interfacing with health care services to childbearing families in the community.

Specific Objectives

The student will be able to:

1. List the major tests used to determine pregnancy.
2. List the clinical signs and symptoms of pregnancy.
3. Discuss the major stages of the developing fetus.
4. Discuss the psychologic and physiologic adjustments to pregnancy.
5. Identify the health care need of pregnant adolescents.
6. List the 8 danger signals in pregnancy.
7. Plan a nutritious diet for a pregnant client.
8. Discuss the affects of smoking, alcohol, and drugs on the developing fetus.
9. Match minor discomforts of pregnancy with the correct description and treatment.
10. Describe the signs and symptoms of labor, the onset of labor, and the four stages of labor.
11. Select the appropriate term used to describe abortions and match with the correct definition.
12. Discuss the normal psychological and physiological changes that occur in the postpartal period.
13. List appropriate community resources available for family planning.

14. List and describe 6 predisposing factors to postpartal infections.

15. List and describe 9 complicaitons of the postpartal period.

CONTENT OUTLINE

I. Diagnosis of Pregnancy
   A. Pregnancy tests
   B. Determination of estimated date of delivery
   C. Clinical signs and symptoms of pregnancy

II. Development and Physiology of the Fetus
   A. Biologic processes, development and physiology of the placenta and fetus
   B. The high risk fetus

III. Physiological and Psychological Adjustments to Pregnancy
   A. Physiologic adjustments
   B. Psychologic adjustments
   C. The adolescent and pregnancy
   D. Pseudocyesis (psychogenic pregnancy)

IV. Prenatal Care
   A. Importance of prenatal visits to the clinic of family physician
   B. Danger signs and symptoms that should be reported if they occur during the prenatal period
   C. Nutrition during pregnancy
      1. Daily food requirements
      2. Emphasis on adequate nutrition versus weight control
   D. Smoking, alcohol, and other drugs during pregnancy
   E. General hygiene
   F. Dental care
   G. Sexual relations during pregnancy
   H. What to prepare to take to the hospital, what to buy for the baby

V. Minor Discomforts and Complications of Pregnancy

VI. Labor and Delivery, the Period of Parturition
   A. Signs and symptoms of the onset of labor
   B. Onset and duration of labor
   C. First stage of labor
   D. Second stage of labor
   E. Third stage of labor
   F. Fourth stage of labor

VII. Conditions of Pregnancy

A. Abortion
B. Ectopic pregnancy
C. Cesarean section
D. Toxemias of pregnancy

VIII. Postpartal Period
A. Psychological aspects
B. Physiological and clinical aspects
C. Intergration of the infant into the family
1. Mother's change in role
2. Father's change in role
3. Sibling rivalry
4. Changes in family roles

IX. Family Planning

X. Complications of the Postpartum Period
A. Predisposing factors to postpartum infections
B Endometritis
C. Pelvic cellulitis (parametritis)
D. Cervicitis
E. Thrombophlebitis
F. Mastitis
G. Delayed postpartum hemorrhage
H. Puerperal hematomas
I. Subinvolution
J. Rh isoimmunization

UNIT VII

HEALTH CARE NEEDS OF THE NEONATE

General Objective

Upon completion of this unit, the student will be aware of the health care needs of the neonate after discharge from the hospital, and will be able to interface with health care providers in an educational and supportive manner.

Specific Objectives

The student will be able to:

1. List the physiologic needs of the neonate.
2. Discuss infant nutrition, including a discussion of the typical caloric needs of infants, breast feeding vs. formula feeding, frequency of feeding and the introduction of solid foods.
3. Educate parents or significant others to perform basic infant care for their neonate: ie. bathing, skin care, and care of elimination
4. Discuss typical sleeping patterns of neonates and the recommended sleeping arrangements for neonates at home.
5. Discuss elimination needs of the neonate and measures the parent can take if constipation or diarrhea occur.
6. Discuss why diarrhea is considered to be of great concern in the neonate.
7. Discuss the emotional needs of infants and how parents should manage crying.
8. List the five major safety needs of infants and explain each.
9. Match the appropriate congential anomaly with a description or definition of each anomaly.
10. Discuss the home care and precautions needed for premature neonates after discharged from the hospital.

CONTENT OUTLINE

I. Physiological Needs of the Newborn
   A. Warmth
   B. Infant nutrition
   C. Infant care
   D. Sleep patterns and sleeping arrangements
   E. Elimination
      1. Use of suppositories
      2. Use of water, sugar water, or other diatary methods to prevent constipation
      3. Diarrhea
         a. Stop formula, feed "jello water" or pedialyte
         b. Call physician

II. Emotional Needs of the Newborn
   A. Picking up the baby when he cries
   B. Holding the baby

III. Safety Needs of Newborns
   A. Car seats
   B. Never leaving child unattended
   C. Coal vs. hot mist vaporizer
   D. Pacifiers
   E. Cribs

IV. Health Care Needs of Premature Infants and Infants with Congenital Anomalies in the Home Setting After Discharge from the Hospital
   A. Premature infants
   B. Fractures resulting from birth
   C. Erb's palsy
   D. Facial paralysis
   E. Hydrocephalus
   F. Down's syndrome
   G. PKU, phenyldetonuria
   H. Spina bifida
   I. Cleft lip and cleft palate
   J. Esophageal atresia and tracheoesophageal fistula (increased susceptibility to pulmonary infections during the first year of life)
   K. Imperforate anus
   L. Omphalocele and diaphragmatic hernia
   M. Hypospadias
   N. Conginital heart abnormalities
   O. Clubfoot (talipes)

UNIT VIII

NORMAL GROWTH AND DEVELOPMENT
OF CHILDREN

General Objective

Upon completion of this unit, the student will be knowledgeable about the typical health care needs of different ages. The student will be able to refer children and their families to appropriate community resources when problems in growth and development are identified, and to provide educational and supportive services to families, regardless of age.

Specific Objectives

The student will be able to:

1. List and discuss the 5 principles of growth and development.
2. List and discuss 4 genetic influences on growth and development.
3. State and discuss 4 environmental influences on growth and development.
4. Explain prehension and locomotion in motor growth and development.
5. Explain the emotions of love, fear, anger, and jealousy in growth and development.
6. Explain the administration of and interpretation of results of the Denver Developmental Screening Test.
7. Discuss the physical growth, the motor growth, the language development, anticipatory guidance and psychosocial challenges for each of the following age groups:

    Infant (1 month to 12 months)
    Toddler (1 to 3 years)
    Preschool (4 and 5 years)
    School age (6 to 10 years)
    Preadolescence or puberty (10 to 12 years)
    Adolescence (12 to 19 years)
    Late adolescence (16 to 19 years)

CONTENT OUTLINE

I. Principles of Growth and Development
   A. Orderly sequence
   B. Continuity
   C. Differences in growth rates
   D. Variation of growth rates for different body structures
   E. Growth and development as a total process

II. Genetic and Environmental Influences and Limitation
   A. Genetic influences
      1. Chromosonal defects
      2. Down's syndrome
      3. Sex chromosome aberrations
      4. Genetic defects and influences
   B. Environmental influences
      1. Home
      2. Family
      3. Nutrition
      4. Disease

III. Physical Growth
   A. Height
   B. Weight
   C. Body proportions
   D. Bone formation
   E. Tooth formation

IV. Motor Development
   A. Prehension
   B. Locomotion

V. Intellectual Development

VI. Emotional Growth
   A. Love
   B. Fear
   C. Anger
   D. Jealousy

VII. Social Behavior and Moral Values

VIII. Denver Developmental Screening Test

IX. Ages of Growth and Development
   A. Birth to 1 month
      1. physical growth
      2. Motor development
      3. Language development
      4. Anticipatory guidance
      5. Basic psychosocial challenges

B. One to three months
   1. Physical growth
   2. Motor development
   3. Anticipatory guidance
   4. Language development
   5. Basic psychosocial challenges

C. Three to six months
   1. Physical growth
   2. Motor development
   3. Language development
   4. Anticipatory guidance
   5. Basic psychosocial challenges

D. Six to eleven months
   1. Physical growth
   2. Motor development
   3. Language development
   4. Anticipatory guidance
   5. Basic psychosocial challenges

E. 12 months
   1. Physical growth
   2. Motor development
   3. Language Development
   4. Anticipatory guidance
   5. Basic psychosocial challenges

F. 15 to 18 months (toddler 1 to 3 years)
   1. Physical growth
   2. Motor development
   3. Language development
   4. Anticipatory guidance
   5. Basic psychosocial challenges

G. 24 months, 30 months, 3 yrs., 4 yrs., 5 yrs., 6 yrs., 7 yrs., 8 and 9 yrs., 10 to 12 years (preadolescence or puberty), 12 to 16 yrs., late adolescence

UNIT IX

HEALTH CARE NEEDS AND PROBLEMS OF CHILDREN

General Objective

Upon completion of this unit, the student will be knowledgeable about health care needs of children and will be able to provide educational and supportive assistance to families to meet the health care needs of sick and well children.

Specific Objectives

The student will be able to:

1. List and discuss basic health care needs of children.
2. Discuss motor development, physical growth and personality growth and development for children according to the various major age groups of infants, toddlers, preschoolers, school age and adolescents.
3. Match common health problems of children with the appropriate treatment.
4. List the major immunization needs of children according to the basic time schedules.
5. Discuss the major safety needs of children according to the basic age groups.
6. Utilize the course textbook to appropriately plan and implement a basic health care needs inventory which will meet the needs of the childbearing families in the community.

CONTENT OUTLINE

I. Health Care Needs of Children
   A. Fluid and Electrolyte balance
      1. Acid-base balance
      2. Fluid volume
      3. Maintenance therapy
      4. Fluid compartments
   B. Cleanliness

C. Rest
D. Preventive measures
   1. Basic nutrition, feeding schedule
   2. Flouride
   3. Immunizations
E. Appropriate toys for play according to age
F. Psychological preparation of children who are going to be admitted to the hospital, or for treatments and procedures
G. Common diagnostic tests and their values performed on:
   1. Blood specimens
   2. Urine specimens
   3. Stool specimens
   4. Electrocardiogram
   5. Electroencephalogram
   6. Sweat test
   7. Barium enema
   8. Brain scan
   9. Cystogram
   10. GI series

II. Health Problems and Needs of Children
A. Common skin problems
B. The importance, infecting agent mode of transmission, communicable period, incubation period, symptoms, treatment and nursing care, and prevention of the following communicable childhood diseases:
   1. Bacillary dysentery (shigellosis)
   2. Chicken pox (varicella)
   3. Diptheria
   4. German measles, rubella, measles rubeola
   5. Gonorrhea
   6. Herpes zoster
   7. Hepatitis type A, type B
   8. Meningococcal meningitis
   9. Infectious mononucleosis
   10. Mumps
   11. Rabies (hydrophabia)
   12. Staphylococcal infections
   13. Streptococcal infections
   14. Syphilis
   15. Tetanus (lockjaw)
   16. Tuberculosis
   17. Typhoid fever
   18. Whooping cough
C. Common problems of the neuromuscular and skeletal systems
   1. Depressed, transverse, spiral, oblique, and comminuted fractures
      a. Indications of a fracture
      b. The use of splints
   2. Joint and extremity problems
      a. Arthrodesis
      b. Arthropasty
      c. Osteotomy
      d. Bone block
      e. Tendon transplant
      f. Epiphyseal arrest

g. Bone tumors
h. Spinal curvature, scoliosis

D. Nervous system diseases that may affect the bones and muscles
1. Seizure disorders
2. Meningitis
3. Cerebral palsy
4. Blindness
5. Cataract
6. Other visual problems
a. Myopia, hyperopia
b. Amblyopia
c. Strabismus
7. Hearing problems
8. Encephalitis
9. Brain tumors
10. Neuroblastoma
11. Head injuries - concussion, contusion, and laceration, intracranial hematomas, epidural hematoma, subdural hematomas, and skull fracture
12. Technique and observations needed for cranial function checks

E. Problems of the respiratory and circulatory systems and the treatment
F. Circulatory disorders and their treatments
G. Problems involving digestion and associated metabolism
H. Problems involving the genitourinary system

III. Child Safety
A. Accidents
B. Poison ingestion
C. Misuse of drugs
D. Child abuse

SECTION D
HEALTH CARE NEEDS AND PROBLEMS OF THE GERIATRIC CLIENT

UNIT X

HEALTH CARE NEEDS OF THE GERIATRIC CLIENT

General Objective

Upon completion of this unit, the student will be aware of the normal health care needs of the older adult and will be able to provide educational and supportive services for health care teams working with the geriatric client and their families.

Specific Objectives

The student will be able to:

1. Discuss the myths and realities about aging.
2. Discuss 5 problems confronting the elderly in our society today.
3. Discuss the 2 major developmental tasks facing the geriatric client/families.
4. Describe 7 services that are available in the community.
5. Describe the characteristic changes that occur as a result of normal aging and how those changes can be managed.

CONTENT OUTLINE

I. The Aging Population
   A. Population characteristics
   B. Myths and realities about aging
   C. Problems confronting the older adult
      1. Finances
      2. Housing
      3. Nutrition
      4. Health care costs
      5. Crime
   D. National concerns about the aging population

II. Developmental tasks of older adults
   A. Finding life meaningful after retirement
   B. Adjusting to decreasing physical health and strength

C. Volunteer service, part-time employment
D. Senior Citizens Clubs
E. Adjusting to retirement income/budgeting
F. Satisfaction within the family
G. Reality of death
H. The living will
I. Funerals and other considerations
J. Bereavement and widowhood
K. Remarriage

III. The Community and the Older Adult
A. Public Housing
B. Community health programs
C. Nutrition services
1. Nutrition sites, municipal
2. Home delivered meals
3. Food-stamp programs
D. Multipurpose senior centers
E. Senior-citizens clubs
F. Homebound services
1. Nutrition, personal care
2. Volunteer friendly visitor service
3. telephone reassurance service
G. Social services
1. Medicaid
2. Social security

IV. The Normal Aging Process and How to Cope With It
A. Skeletomuscular changes
1. Exercise
2. Safety
3. Prevention
B. Circulatory-Respiratory changes
C. Digestive system changes
1. Chewing and diet
2. Constipation
3. Dyspepsia
D. Urinary system changes
E. Reproductive system changes
F. Integumentary system changes
G. Nervous system
1. Slow reaction time
2. Intellect
3. Sensory changes
4. Eye and ear changes

UNIT XI

HEALTH CARE PROBLEMS AND DISEASES OF THE GERIATRIC CLIENT

General Objective

Upon completion of this unit, the student will be knowledgeable about the specialized health care needs of geriatric clients and families living in the community.

Specific Objectives

The student will be able to:

1. Discuss five alternatives to health care for geriatric clients.
2. List 10 factors to consider when selecting an institution for health care.
3. Utilize a system by system approach to discuss the diseases and disorders associated with the geriatric client.
4. Discuss 6 factors of death and dying associated with the geriatric client.

CONTENT OUTLINE

I. Illness in the Geriatric Client
   - A. Reactions to illness
   - B. Alternatives for health care
     1. Home care
     2. Institutional care
        - a. Public health - care institutions
        - b. Private, nonprofit health care institutions
        - c. Private propietary (profit) institutions
        - d. Licensed facility
        - e. Certified facility
        - f. General hospital
        - g. Long term care facility
        - h. Extended care facility
        - i. Skilled nursing home
        - j. Intermediate - care facility
        - k. Boarding homes

C. Factors to consider when selecting a place for health care
   1. Nature of the illness
   2. Attitudes of patient and family
   3. Ability to pay
   4. Availability
   5. Effect of institutionalization
      a. Dependence
      b. Fear of the unknown
      c. Fear of death
      d. Fear of financial dependence
      e. Confusion and disorientation
      f. Loss of individuality
      g. Loss of self determination
      h. Anger and hostility
      i. loneliness and isolation
      j. Relationships with family and friends

II. Health Problems and Diseases of the Older Adult According to Each Body System
   A. Health problems and diseases of the skeletomuscular system and prescribed treatment
      1. Arthritis
      2. Rheumatoid arthritis
      3. Osteoarthritis
      4. Fractures
      5. total hip replacement
      6. Amputation
   B. Health problems and diseases of the nervous system and their treatment
      1. Parkinson's disease
      2. Cataracts
      3. Glaucoma
      4. Mental health
   C. Health problems and diseases of the circulatory-respiratory systems and their treatment
      1. Cerebral vascular accident
      2. Peripheral vascular disease
   D. Diabetes mellitus in the older adult, problems and treatment

III. The Problem of Cancer and Its Treatment in the Geriatric Client and Family

IV. Death and Dying
   A. Attitudes about death
   B. Hospice movement
   C. Care of the dying
   D. Signs of impending death
   E. Meeting religious needs
   F. Consolation of the family

SECTION E
FIRST AID AND EMERGENCY CARE

UNIT XII

FIRST AID AND EMERGENCY CARE

General Objective

Upon completion of this unit, the student will be able to provide appropriate paraprofessional-level first aid in an emergency situation, and the student will receive a certificate in First Aid.

Specific Objectives

The student will be able to:

1. Discuss the need for and the value of first aid training.
2. Discuss the various types of wounds and the first aid required for each type.
3. Discuss specific injuries to the various parts of the body and the first aid required for each type.
4. Explain first aid for shock.
5. List signs and symptoms of respiratory failure.
6. Describe the various categories of poisoning and t[illegible]ecessary first aid required for each.
7. Discuss drugs and their abuse.
8. Discuss the causes and effects, classification, extent and location and first aid for burns.
9. Explain the signs, symptoms, and first aid for cold exposure and frostbite.
10. Explain the signs, causes, symptoms, and first aid for heat stroke, leg cramp, and heat exhaustion.
11. Discuss joint injuries and the required first aid.
12. List the various types of bandages and the purpose for each type.

13. Explain first aid measures for an emergency childbirth.

14. List the various types of emergency rescues and transfer and the first aid for each.

15. Explain the procedure for removing persons from an automobile, a cave, or an elevator.

CONTENT OUTLINE

I. Introduction to First Aid
   A. Need for first aid training
   B. Value of first aid training
      1. Self-help
      2. Help for others
      3. Preparation for disaster
      4. Safety awareness
   C. General directions for first aid
      1. Urgent care
      2. Additional first aid directions

II. Wounds
   A. Definitions
   B. Causes
   C. Effects
   D. Types and causes of open wounds
   E. First aid for open wounds
   F. Infection
   G. Closed wounds

III. Specific Injuries
   A. Eye
   B. Head
   C. Face and jaw
   D. Neck
   E. Mouth
   F. Ear
   G. Nose and nosebleed
   H. Chest
   I. Abdomen
   J. Back
   K. Genital organs
   L. Hands
   M. Legs and feet

IV. Shock
   A. Definition
   B. Causes
   C. Early stages
   D. Late stages
   E. First aid

V. Respiratory Emergencies and Artificial Respiration
   A. Definition
   B. Causes of respiratory failure
   C. The breathing process
   D. Signs and symptoms of respiratory emergencies
   E. Artificial respiration
   F. Removal of foreign bodies from the throat

VI. Drowning, Water Accidents and Resuscitation
   A. Definition
   B. Kinds of water accidents
   C. Causes of drowning
   D. First aid
   E. Neck and spinal injuries in water accidents
   F. Water rescue
   G. Ice rescue

VII. Poisoning
   A. Definition
   B. Causes
   C. Ingested poisons
   D. Inhaled poisons
   E. Contact poisons
   F. Poisoning by Marine life
   G. Poisoning by insects
   H. Poisoning by venomous snakes

VIII. Drugs and Their Abuse
   A. Definitions
   B. Identification of drug abuse
   C. Classification
   D. Extent and location
   E. First aid

X. Exposure to Radiation

XI. Cold Exposure and Frostbite
   A. Signs and symptoms
   B. First aid

XII. Heat Stroke, Heat Cramps and Heat Exhaustion
   A. Definition
   B. Causes
   C. Signs, symptoms, and first aid

XIII. Bone and Joint Injuries
   A. Definition
   B. Fractures
   C. First aid for specific fractures
   D. Dislocation
   E. Sprains
   F. Strains
   G. Application of traction splints for fracture to the femur

XIV. Dressings and Bandages
- A. Use of bandages and dressing
- B. Bandages for specific purpose
- C. First aid kit and supplies

XV. Sudden Illness
- A. Illness evidenced by unconsciousness
- B. Hemorrhage
- C. Pain
- D. Rapid heartbeat
- E. High fever
- F. Mental and emotional disturbances

XVI. Emergency Childbirth
- A. Signs and symptoms of impending childbirth
- B. Delivery procedures
- C. Care after delivery
- D. Supplies for emergency childbirth

XVII. Emergency Rescue and Transfer
- A. Definition of emergency rescue
- B. Indications for immediate rescue
- C. Objectives
- D. Immediate rescue without assistance
- E. Immediate rescue with assistance
- F. Use of stretchers, litters, and backboards

XVIII. Extrication
- A. Removal from automobile
- B. Unusual situations
- C. Structural collapse
- D. Toxic or oxygen
- E. Impaled victims
- F. Electrical emergencies

SUPPLMENTARY MATERIALS

STUDENT EVALUATION

No prepared tests and answer keys have been provided with these course materials. We feel that the specifics of testing both in the laboratory and in the classroom for Paraprofessional Skills will depend, at least at lower cognitive levels, on the texts available to the students. The objectives from each unit, in coordination with the content outlines, can be used to write multiple choice, fill-in-the-blank,short answer, true/false, and low level discussion questions which would reflect the student's learning in the classroom. Several of the laboratory resources mentioned for this course include their own evaluation procedures.

The higher cognitive levels for the lecture and classroom discussion sessions and for the laboratory can be evaluated by using the type of special activity mentioned in the General Recommendations for the Instructor.

Laboratory skills will be evaluated as the class is taught and can be organized into "practical" exams as the instructor sees fit and as the resources allow. The first aid portion of the course and the cardiopulmonary resusitation skills are taught by the Red Cross with criterion based evaluation; certificates are awarded only to those who show evidence of ability to consistently apply the techniques presented. Qualifying to receive these certificates could be made a requirement for passing the laboratory portion of these courses or for attainment of a grade of B or better. If it can be arranged, students should be required to earn these certificates before they

receive their Aasociate Degree.

The use of decision point flow charts, computer assisted teaching and evaluation and other "modeling" approaches to teaching and learning is highly recommened, as are newly developed interactive programs using micro-computers and laser video disk technology. These are also excellant tools to use to make skill evaluation more realistic.

OTHER MATERIALS IN THIS SERIES

The U. S. Department of Education contracted with the Baptist College at Charleston to produce the following products, which are now available as part of the Rural Health Promotion Series supporting an associate degree in rural health.

1. A Final Project Report , including summary information about the design of the 2 year degree; conceptual, developmental, and applications issues; and a compilation and analysis of preliminary qualitative evaluation of the program components (by professionals in the health care field) and the programs goals (by rural residents and care providers).

2-8. A series of seven courses designed to meet the needs of this two year degree including -

Interpersonal Communications: skills in listening, sharing information, observation, and assessment,with special focus on cultural concerns, verbal and non-verbal messages.

Epidemiology: inter-relations of disease development and prevention in a public health model of host, agent, and environment; specially focused at the sophomore level.

Concepts of Chemistry: an up-dating of traditional chemistry concepts for allied health.

Health Care Organization and Issues: An overview of community health care systems with special focus on issues such as financial support, ethical dilemmas, changing services and technologies, and future directions, including

computers in intervention, treatment and education.

Health Promotion Seminar: A hands-on personal experience in behavior change around life-style issues, including up to date data and consideration of popular media ideas of health promotion.

Fundamentals of Paraprofessional Care I and Fundamentals of Paraprofessional Care II: A sequence of two courses designed to produce a person educated in major health issues and responses, with special skill development in physical care, emotional support, personal hygiene, safety and first aid (including Cardio-Pulmonary Resusitation).

Each of the instructor resource guides for teaching one of the above courses includes overview material on the total project (to provide perspective for content and methodological elements) as well as context of the course in the overall curriculum.

9. Rural Health Focus Guides for Core Content of the Health Promotion Associate Degree: This document is the work of professional educators in fields which make up the curricular core of the associate degree. The focus guides are the result of thoughtful consideration by these teachers regarding how their subject area relates to the necessary knowledge and competencies of a community paraprofessional in health promotion. All of the authors of the focus guides attended a workshop on health promotion which brought together core faculty, health educators, rural health sociologists, rural health care

providers, and rural health care recipients. The focus guides are the product of their individual approaches to the relevance of their subject matter to the overall degree; each gives ideas for highlighting particularly useful areas of a core course without in any way compromising the existing goals and expectations applied to all students who take these courses. Bound together in one volume, the focus guides cover the areas of

Freshman English,
general college mathematics,
general psychology,
human growth and development,
psychology of adulthood and aging,
introductory sociology,
social service systems,
New Testament religion,
interpersonal communications skills,
group dynamics,
anatomy and physiology,
microbiology,
introductory allied health chemistry.

The nine products listed above are in the ERIC system; copies are also housed with the contractor (the Baptist College of Charleston, Charleston, S.C.) and with the funding agency (the U. S. Department of Education, Office of Vocational and Adult Education, Washington, D.C.)